SFOBB Seismic Retrofit (Contract No. 04-01731)

The as-built drawings, which are contained in these CDs, are scanned from drawings of the existing structure for the convenience of the contractor and as a means to convey to the contractor the available information regarding the existing structure. It is to be understood that no claim is being made as to the accuracy or completeness of the said information and that the State of California or its officers or agents shall not be responsible for the manner in which the contractor interprets and uses this information or for the accuracy, currency or completeness of these scanned as-built drawings. The contractor shall be responsible to obtain, at the contractor's expense, any additional information that the contractor deems necessary for completely and accurately assessing the existing conditions of the structure. The contractor shall not be entitled to any compensation for any claim arising from inaccuracy or insufficiency of these as-built drawings or in anyway related to these drawings.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF,Ala	80	7.8/8.8,0.0/1.3	2	15

11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ROBERT WHITTEN No. 43167 Exp. 3-31-92 CIVIL STATE OF CALIFORNIA

AS BUILT

CORREC. S.Whipple

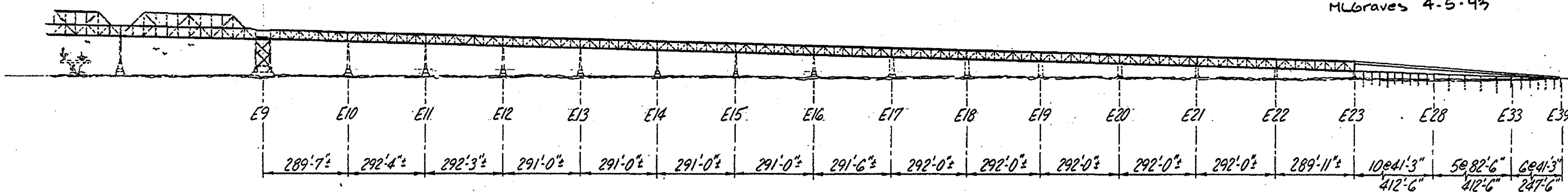
CONTRACT No. 04-001734

DATE 8/92

MLGraves 4-5-93

28 Day Concrete Strengths (PSI)

Pier	Strength	Pier	Strength	Pier	Strength
10N	5620 psi	16N	6220 psi	20N	5175 (Avg)
10S	6030 (4910)	17N	5530 psi	20S	5410 psi
12S	5800 psi	18N	5295 (Avg)	21N	5115 (Avg)
13S	6280 psi	18S	5500 (Avg)	21S	5150 psi
14S	5690 psi	19N	6020 psi	22S	5590 psi

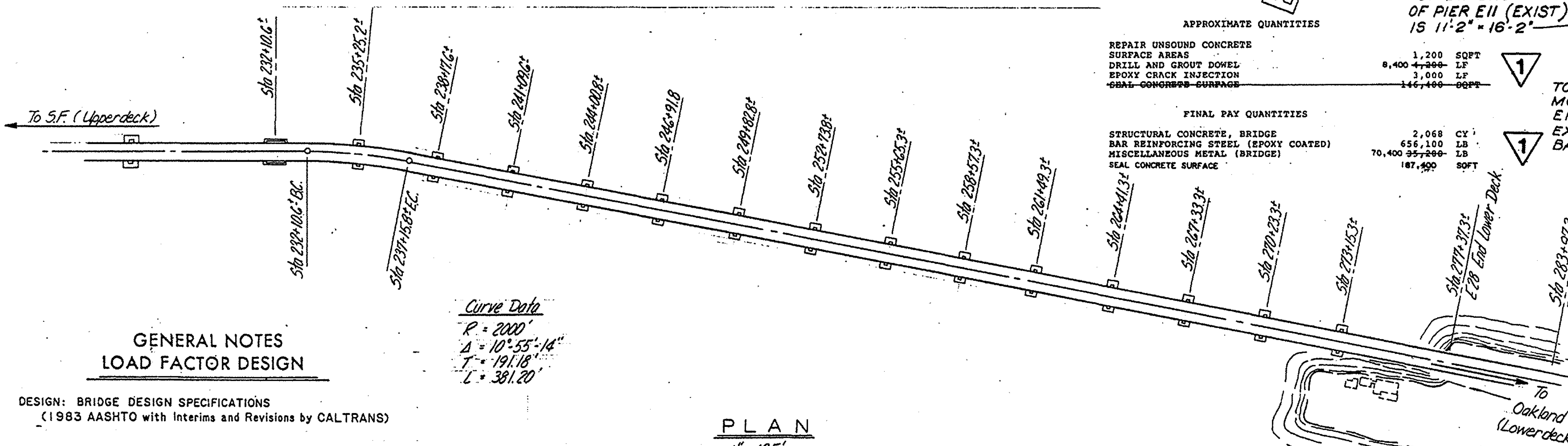


Notes:

1. E10 to E22 Reinforced concrete jacket around existing pedestals
2. E23 to E32 Strengthen anchorages to concrete columns.

ELEVATION

1" = 125'



Curve Data
R = 2000'
Δ = 10°-55'-14"
T = 191.18'
L = 381.20'

PLAN

1" = 125'

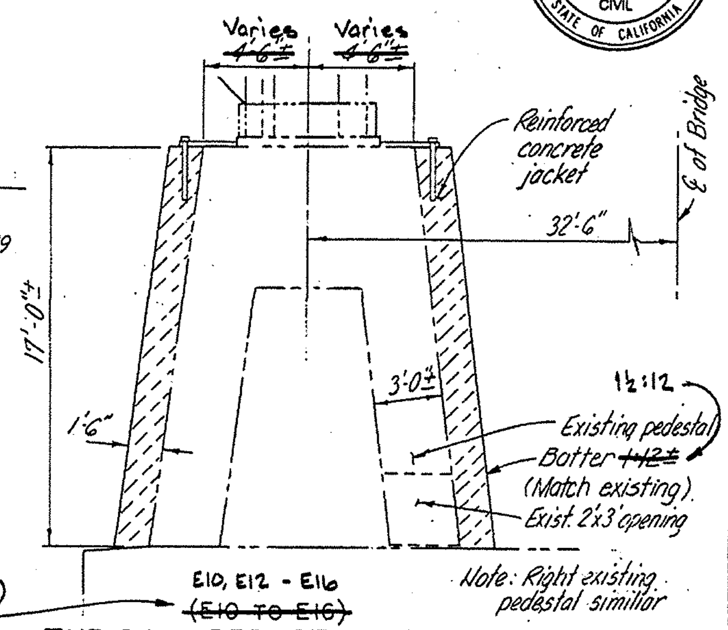
APPROXIMATE QUANTITIES

REPAIR UNSOUND CONCRETE SURFACE AREAS	1,200	SQFT
DRILL AND GROUT DOWEL	8,400 ~~4,200~~	LF
EPOXY CRACK INJECTION	3,000	LF
~~SEAL CONCRETE SURFACE~~	~~146,400~~	~~SQFT~~

FINAL PAY QUANTITIES

STRUCTURAL CONCRETE, BRIDGE	2,068	CY
BAR REINFORCING STEEL (EPOXY COATED)	656,100	LB
MISCELLANEOUS METAL (BRIDGE)	70,400 ~~35,200~~	LB
SEAL CONCRETE SURFACE	187,400	SQFT

TOP DIMENSION OF PIER E11 (EXIST) IS 11'-2" × 16'-2"

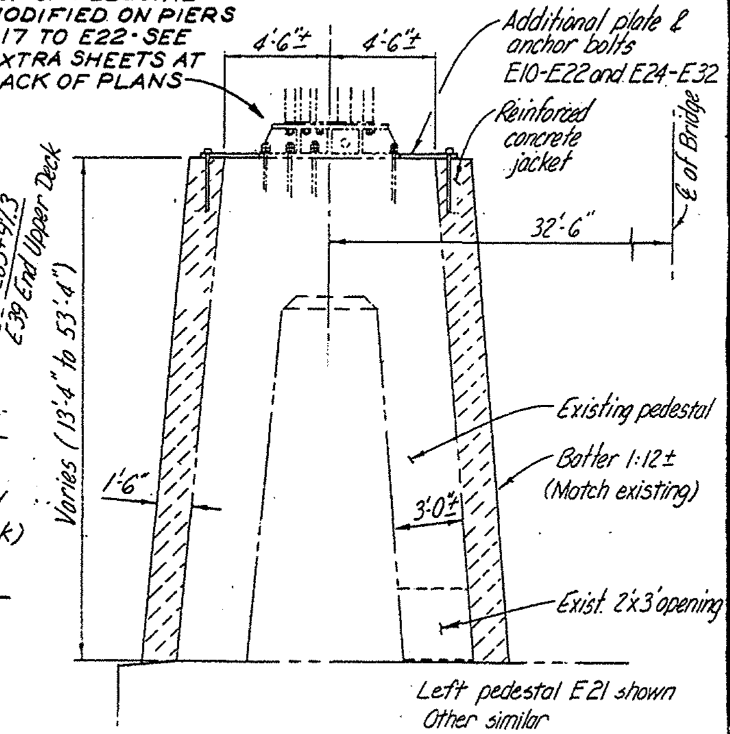


E10, E12 - E16
~~(E10 TO E16)~~
Note: Right existing pedestal similiar

TYPICAL PEDESTAL SECTION

1/4" = 1'-0"

TOP OF PEDESTAL MODIFIED ON PIERS E17 TO E22 - SEE EXTRA SHEETS AT BACK OF PLANS



Left pedestal E21 shown
Other similar

(E17 TO E22)

TYPICAL PEDESTAL SECTION

1/4" = 1'-0"

ADDED SHEETS FOR SHEAR BLOCKS AT TOP OF PEDESTALS

GENERAL NOTES
LOAD FACTOR DESIGN

DESIGN: BRIDGE DESIGN SPECIFICATIONS
(1983 AASHTO with Interims and Revisions by CALTRANS)

REINFORCED CONCRETE: f_y = 60,000 psi
f'_c = 3,250 psi
n = 9

STRUCTURAL STEEL: f_y = 36,000 psi

04001734
16 pages

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

INDEX TO PLANS

1 REVISED FOR ADDENDUM NO. 1 DATED JANUARY 22, 1990

Submitted by R. J. Zelinski 2/89 DESIGN ENGINEER REGISTERED CIVIL ENGINEER NUMBER	DESIGN	By [signature] 9/88	Checked N. Choughari	LOAD FACTOR DESIGN
Approval Recommended By P. Chan 2/89 DESIGN ENGINEER REGISTERED CIVIL ENGINEER NUMBER	DETAILS	By Ralph Nakaoka 9/88	Checked [signature]	LAYOUT By [signature] Checked N. Choughari
	QUANTITIES	By [signature]	Checked [signature]	SPECIFICATIONS By Thomas C. Fellenz 8/89 Plans and Specs Compared TCF 8/89

LIVE LOADING: HS20-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 4
[signature] 43167
PROJECT ENGINEER REGISTERED CIVIL ENGINEER NO.

BRIDGE NO. 33-25
POST MILE 0.0/1.3

S.F.O.B.B. SEISMIC RETROFIT
GENERAL PLAN

DS 050 2139 (2/86)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04333
EA 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY) ~~7/7/88~~ 5/15/89

SHEET 1 OF 14

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8, 0.0/1.3	3R1	15

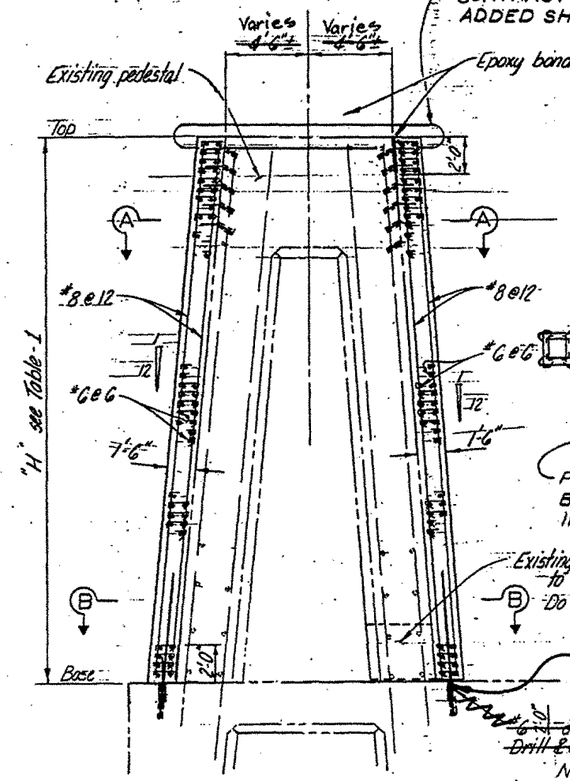
REGISTERED ENGINEER - CIVIL

11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ROBERT WHITTEN — No. C43167 — Exp. 3-31-92 — CIVIL — STATE OF CALIFORNIA

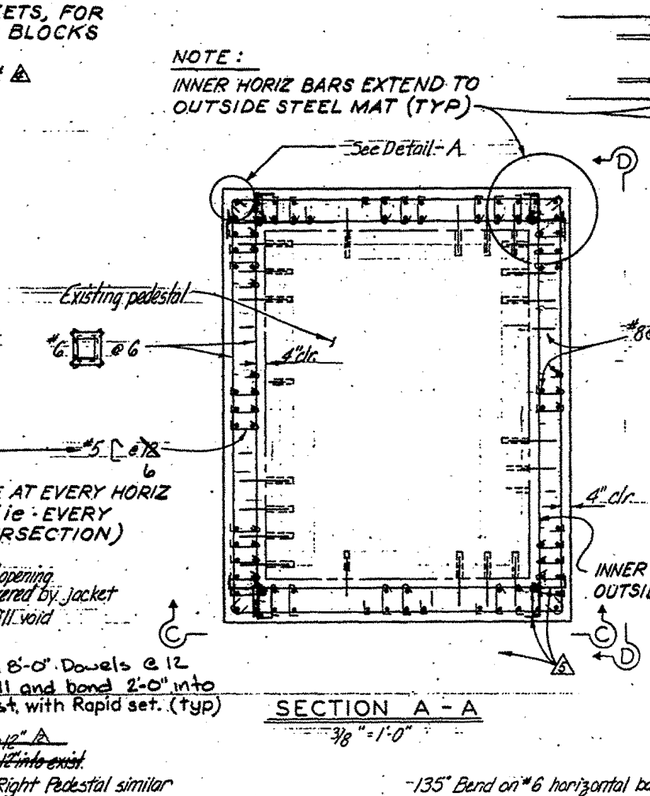
1 REVISED FOR ADDENDUM NO. 1 DATED JANUARY 22, 1990 1

SEE ADDED SHEETS AT END OF CONTRACT SHEETS, FOR ADDED SHEAR BLOCKS



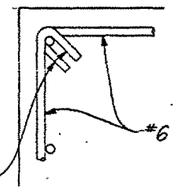
TYPICAL PEDESTAL SECTION
1/4" = 1'-0"

NOTE:
INNER HORIZ BARS EXTEND TO OUTSIDE STEEL MAT (TYP)



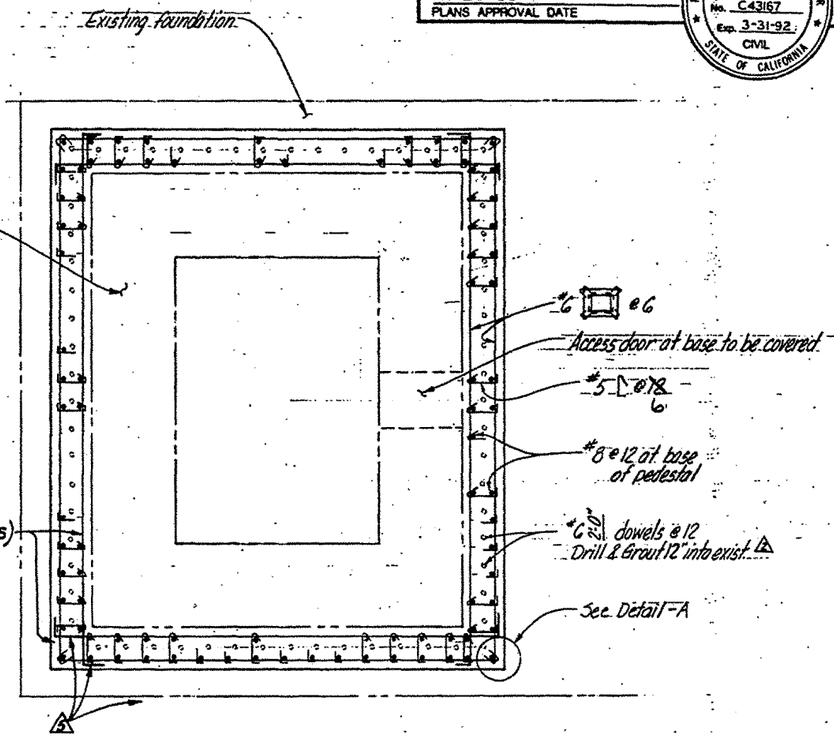
SECTION A - A
3/8" = 1'-0"

AS BUILT
CORREC. J. S. Whipple
CONTRACT NO. 04 - 001734
DATE 8/92
MGGraves 4-5-93



135° Bend on #6 horizontal bars. Typical @ Exterior corners of pedestals E10 thru E22.

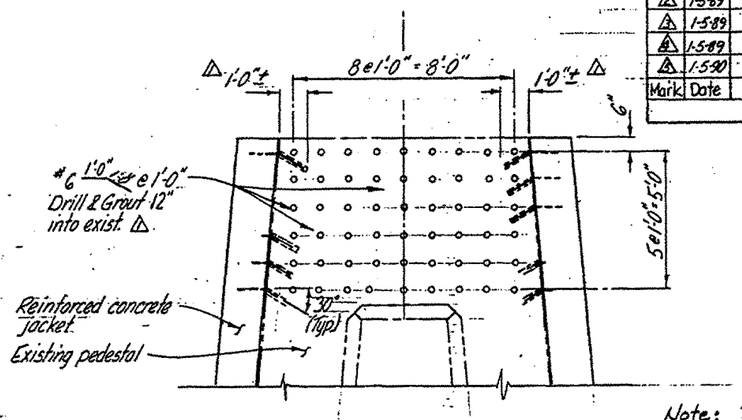
DETAIL - A
No Scale



SECTION B - B
3/8" = 1'-0"

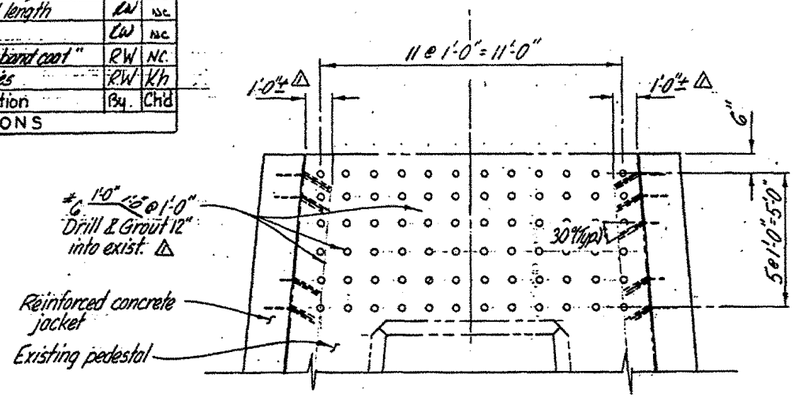
Mark	Date	Description	By	Chd
2	1-5-89	Change dowel length	LW	NC
2	1-5-89	change dowel length	LW	NC
2	1-5-89	add notes	LW	NC
2	1-5-89	add "epoxy bond coat"	RW	NC
2	1-5-90	Lengthen ties	RW	KH

REVISIONS



VIEW C - C
3/8" = 1'-0"

Note: Top of existing Pedestal is sloped to drain.



VIEW D - D
3/8" = 1'-0"

TABLE - 1 (OUTSIDE EXISTING DIMENSIONS±)				
PIER	HT. (H)	BASE		TOP
E17	53'-4"	17'-10½"	20'-10½"	9'-0" x 12'-0"±
E18	45'-4"	16'-6½"	19'-6½"	
E19	37'-4"	15'-2½"	18'-2½"	
E20	29'-4"	13'-10½"	16'-10½"	
E21	21'-4"	12'-6½"	15'-6½"	
E22	13'-4"	11'-2½"	14'-2½"	
~~E10 - E16~~	~~11'-0"~~	~~11'-10"~~	~~14'-10"~~	
E11	17'-0"	15'-4"	20'-4"	11'-2" x 16'-2"
E12 - E16	17'-0"	13'-3"	16'-3"	9'-0" x 12'-0"±
E10	17'-0"	13'-3"	16'-3"	9'-0" x 12'-0"±

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Notes:
1. All reinforcing steel to be epoxy coated. 2
2. Apply concrete sealant to all concrete surfaces of the reinforced concrete jacket including the top of the existing pedestal. 2

DESIGN	By [illegible] 1/93	Checked N. Chouphari	
DETAILS	By Ralph Nakooka 10/88	Checked [illegible] 10/88	
QUANTITIES	By [illegible]	Checked [illegible]	

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 4
PROJECT ENGINEER — REGISTERED CIVIL ENGINEER NO. 42167

BRIDGE NO. 33-25
POST MILE 0.0/1.3

S.F.O.B.B. SEISMIC RETROFIT
PEDESTAL JACKET DETAILS-E10-E22

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04333
EA 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY) 11-1-88 2-15-89 1-22-90

SHEET 2 OF 14

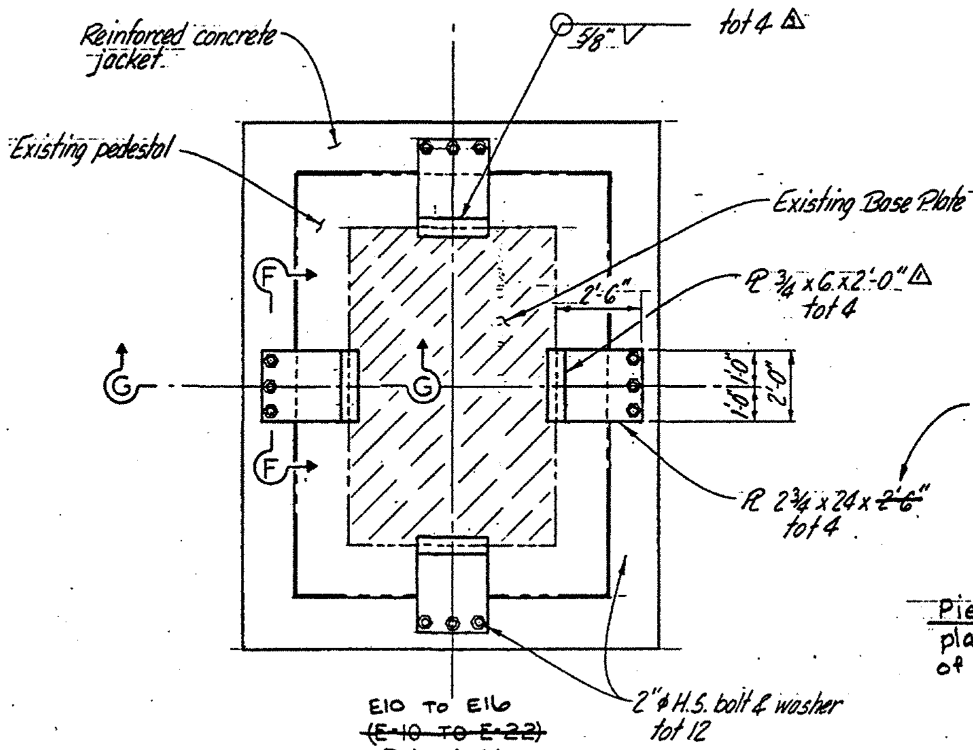
DS 050 2139 (2/86)

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8,0.0/1.3	4	15

REGISTERED ENGINEER - CIVIL

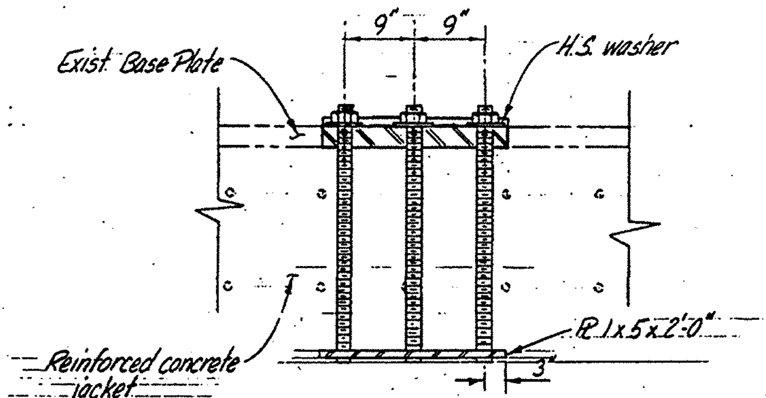
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ROBERT WHITTEN — No. C43167 — Exp. 3-31-92 — CIVIL — STATE OF CALIFORNIA



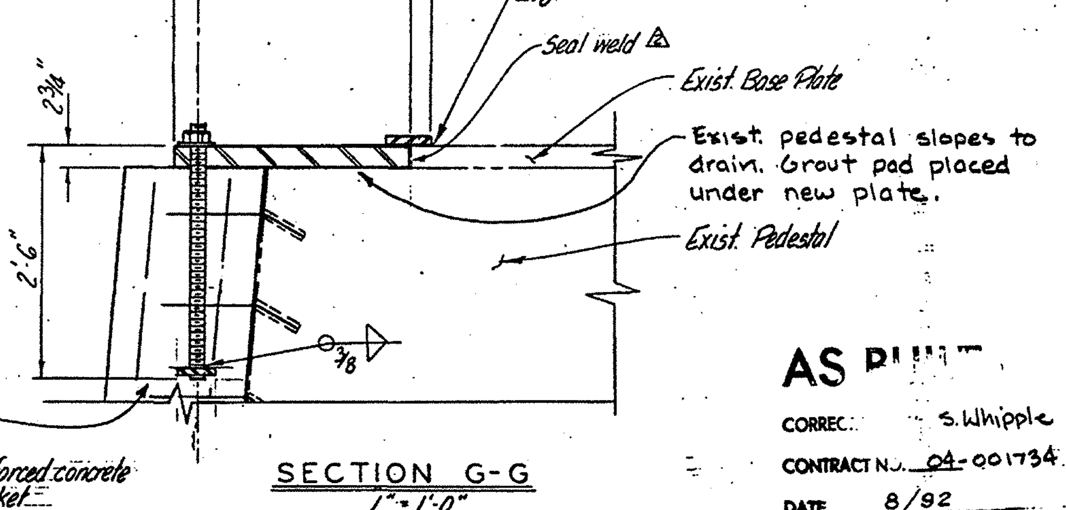
E10 TO E16
~~(E-10 TO E-22)~~
PLAN
3/8" = 1'-0"

Piers E17 TO E22 - New 2 3/4" plate extends to inside face of new shear block only.

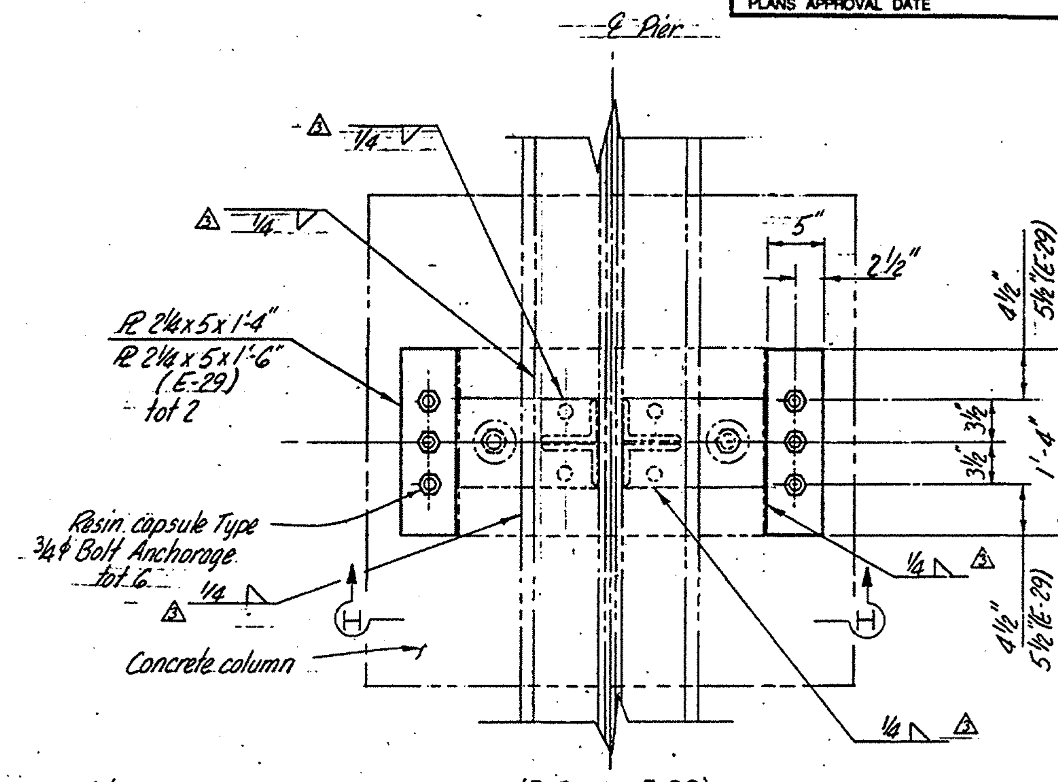


SECTION F-F
1" = 1'-0"

Note:
Dowel in each row may be omitted to accomodate anchor bolts.

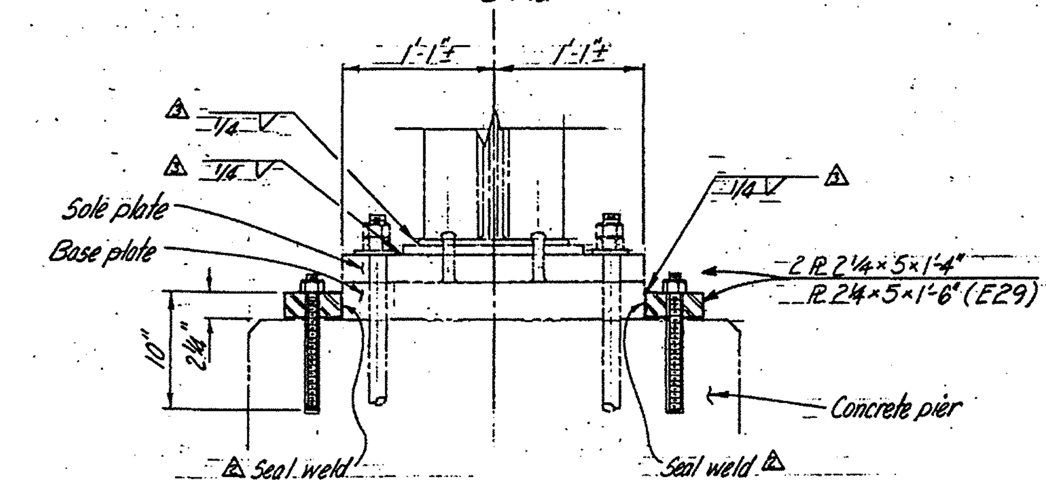


SECTION G-G
1" = 1'-0"



(E-24 TO E-32)
PLAN
1 1/2" = 1'-0"

Note:
Resin capsule anchorage is subject to approval of Engineer. Installation procedure shall comply with manufacturer instructions.



SECTION H-H
1 1/2" = 1'-0"

AS BUILT
CORREC.: S. Whipple
CONTRACT NO. 04-001734
DATE 8/92
MLGraves 4-5-93

MARK	DATE	DESCRIPTION	BY	CH'D
⚠1	1-5-89	change plate size	RW	NC
⚠2	1-5-89	place seal weld	RW	NC
⚠3	1-5-89	change weld type	RW	NC

REVISIONS

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

1 REVISED FOR ADDENDUM NO. 1 DATED JANUARY 22, 1990

DESIGN	By [signature]	Checked N. Choughari
DETAILS	By Ralph Nakaoka 11/88	Checked [signature]
QUANTITIES	By [signature]	Checked [signature]

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 4
PROJECT ENGINEER — REGISTERED CIVIL ENGINEER NO. 43167

BRIDGE NO. 33-25
POST MILE 00/1.3

S.F.O.B.B. SEISMIC RETROFIT
PEDESTAL ANCHORAGE DETAILS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04333
EA 001731

Disregard prints bearing earlier revision dates → 11/1/88 5/15/88 1-2-90

REVISION DATES (PRELIMINARY STAGE ONLY)

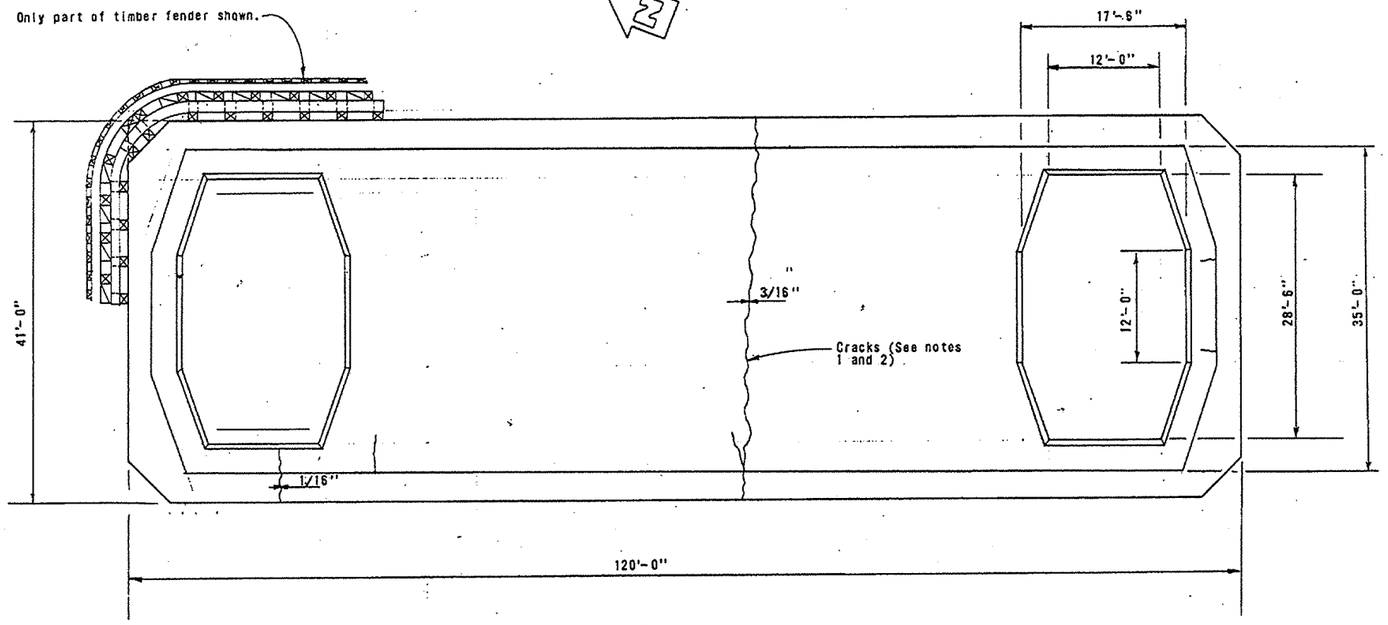
SHEET 3 OF 14

DS OSD 2139 (2/86)

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8,0.0/1.3	5	15

R W White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

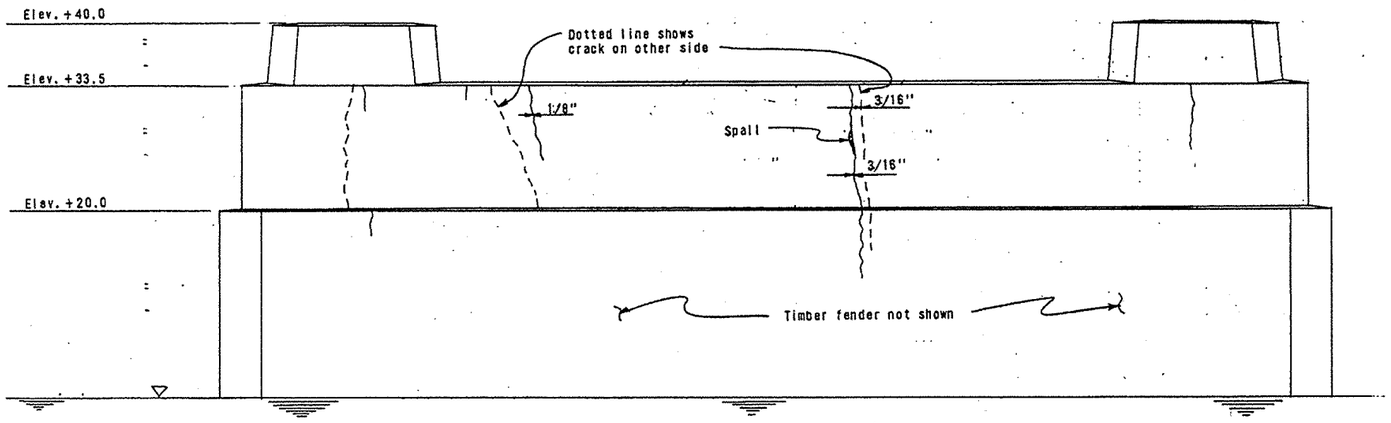
REGISTERED PROFESSIONAL ENGINEER
RICHARD W. WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA



PLAN
No Scale

ACTUAL CRACK SEALING VARIES

Note: Steel superstructure not shown



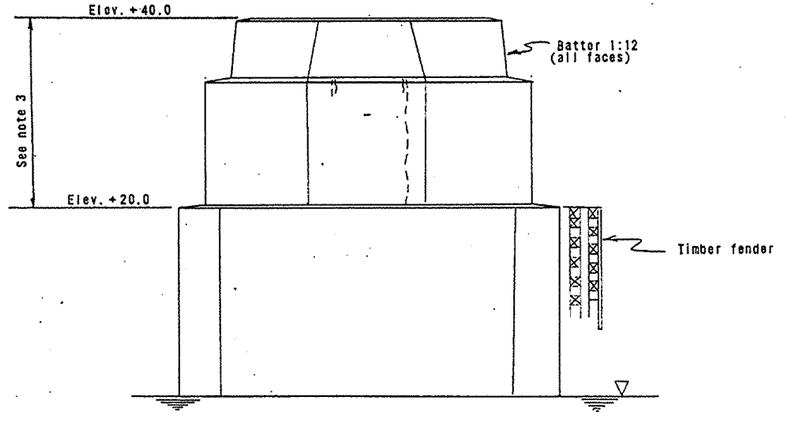
ELEVATION
No Scale

NOTES

1. Inject cracks where shown in plan and elevation views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" in width.
2. The locations of the cracks are taken from field inspection notes and may vary from that shown. The exact locations will be determined by the Engineer in the field.
3. Apply concrete sealant to all concrete surfaces between Elev. +20.0 and Elev. +40.0, including the tops of the pedestals.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS
CORREC S. WHIPPLE
CONTRACT N 04-001734
DATE 8/92 FRS 4/8/94



END ELEVATION
No Scale

DESIGN	By R. White	Checked S. Larsen	
DETAILS	By D. Wu	Checked R. White	
QUANTITIES	By W. Toy	Checked	

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES MAINT.
R Richard White — PROJECT ENGINEER
C16762 — REGISTERED CIVIL ENGINEER NO.

BRIDGE NO. 33-25
POST MILE 0.0/1.3

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E2

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/1/93

SHEET 4 OF 14

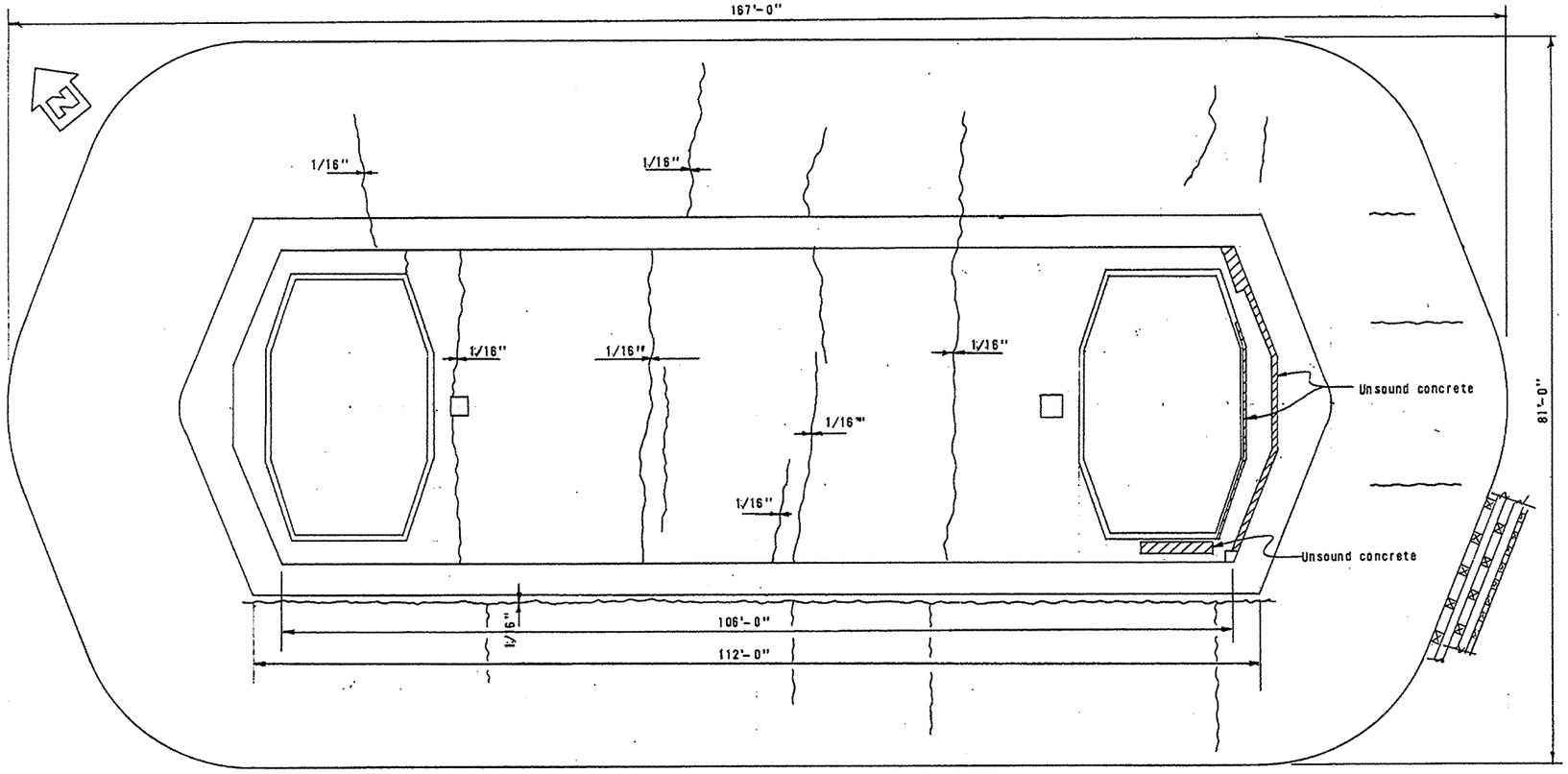
DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Alg	80	7.8/8.8, 0.0/1.3	6	15

REGISTERED ENGINEER - CIVIL

11-20-89

PLANS APPROVAL DATE

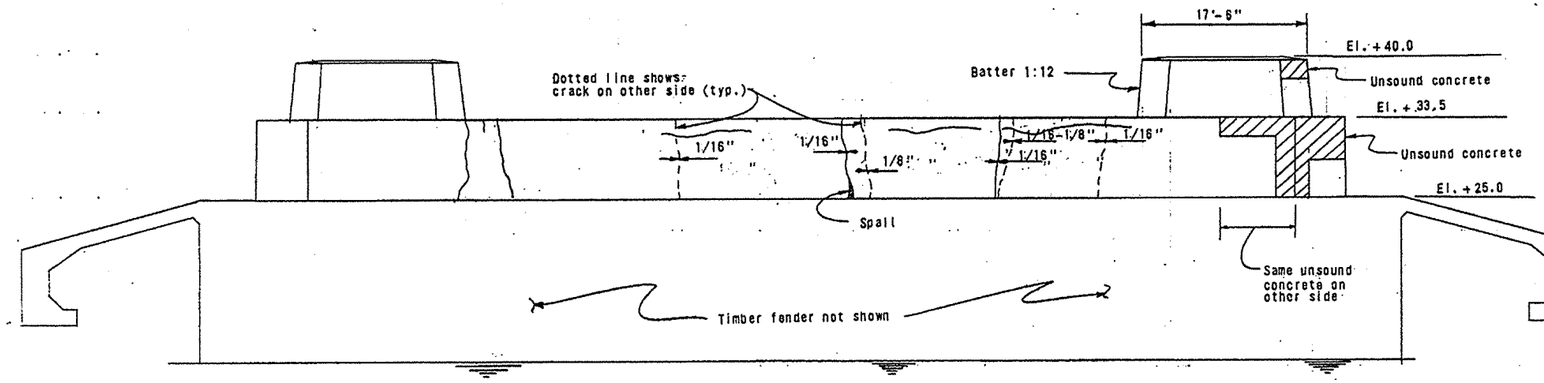
REGISTERED PROFESSIONAL ENGINEER · RICHARD W. WHITE · No. C16762 Exp. 6-30-93 · CIVIL · STATE OF CALIFORNIA



PLAN

No Scale

ACTUAL CRACK SEALING VARIES



ELEVATION

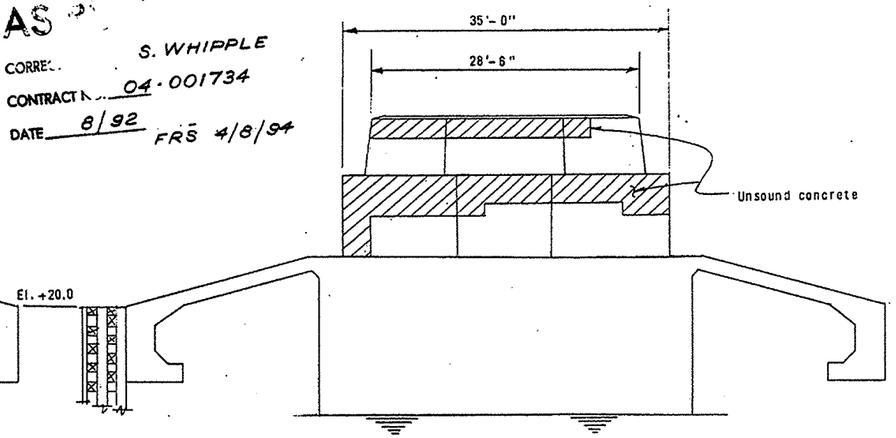
No Scale

AS

CORREC. S. WHIPPLE

CONTRACT NO. 04-001734

DATE 8/92 FRS 4/8/94



END ELEVATION

No Scale

NOTES

1. Inject cracks where shown in plan and elevation views. Crack widths shown are approximate. Undimensioned crackd are less than 1/16" in width.
2. The locations of the cracks are taken from field inspection notes and may vary from that shown. The exact locations will be determined by the Engineer in the field.
3. Apply concrete sealant to all concrete surfaces between Elev.+20.0 and Elev. +40.0, including the tops of the pedestals.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

DESIGN	By R. White	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINT.	BRIDGE NO. 33-25
DETAILS	By D. Wu	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT

PIER E3

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

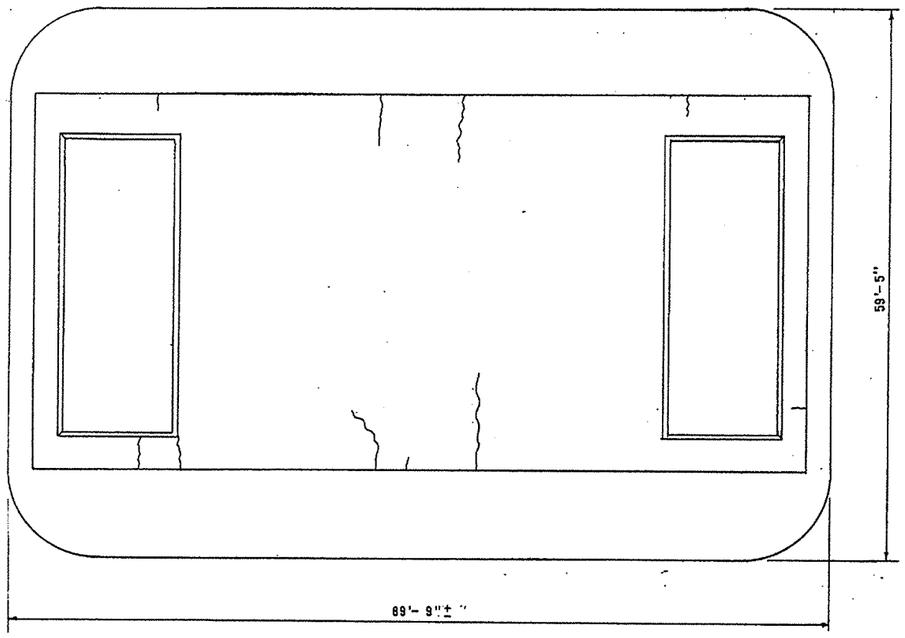
REVISION DATES (PRELIMINARY STAGE ONLY): 2/9/89

SHEET 5 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8, 0.0/1.3	7	15

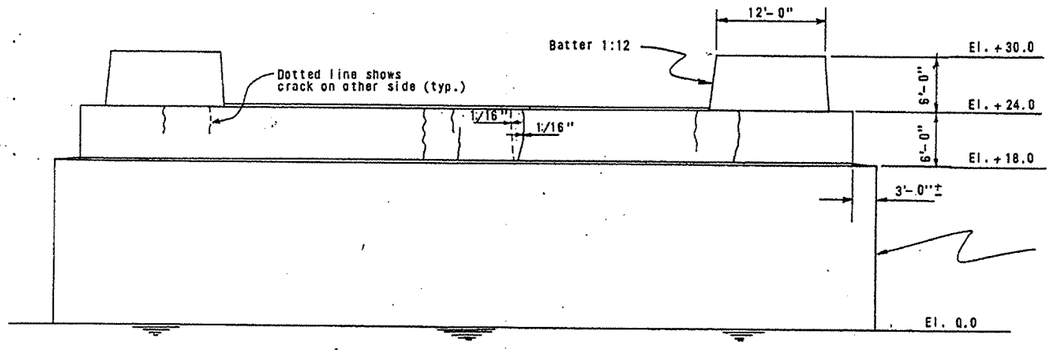
R W White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD W. WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA

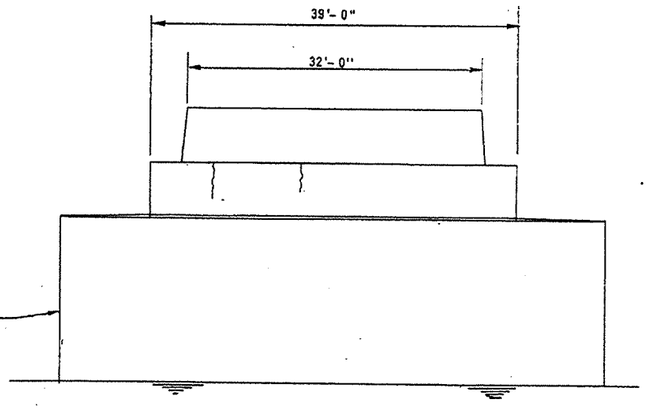


PLAN
No Scale

ACTUAL CRACK SEALING VARIES



ELEVATION
No Scale



END ELEVATION
No Scale

NOTES

1. Inject cracks where shown in plan and elevation views. Crack widths shown are approximate. Undimentioned cracks are less than 1/16" in width.
2. The locations of the cracks are taken from field inspection notes and may vary from that shown. The exact locations will be determined by the Engineer in the field.
3. Apply concrete sealant to all concrete surfaces between Elev. +18.0 and Elev. +30.0, including the tops of the pedestals.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS

CORRES. S. WHIPPLE
CONTRACT NO. 04-001734
DATE 8/92
FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINT.	BRIDGE NO. 33-25
DETAILS	By D. Wu	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER, REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E4

DS D32B 84 21078

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

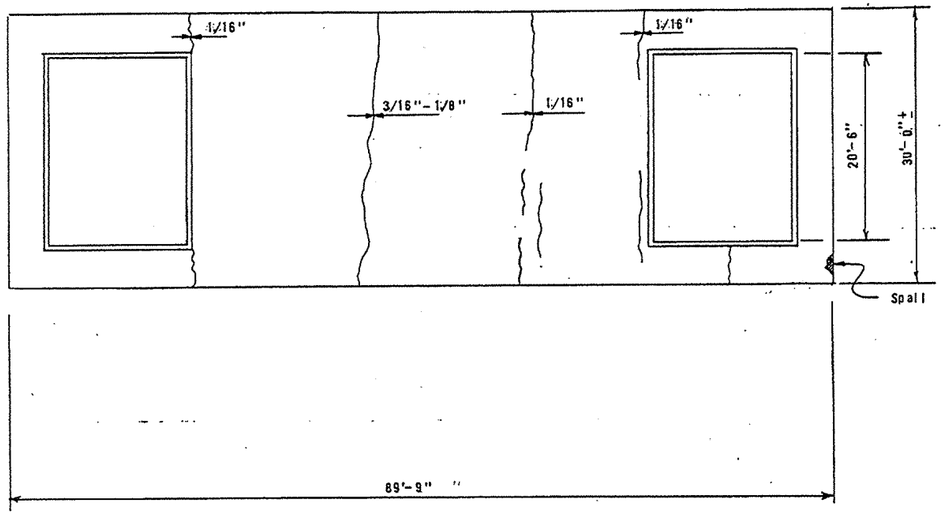
REVISION DATES (PRELIMINARY STAGE ONLY): 7/1/94

SHEET 6 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8, 0.0/1.3	8	15

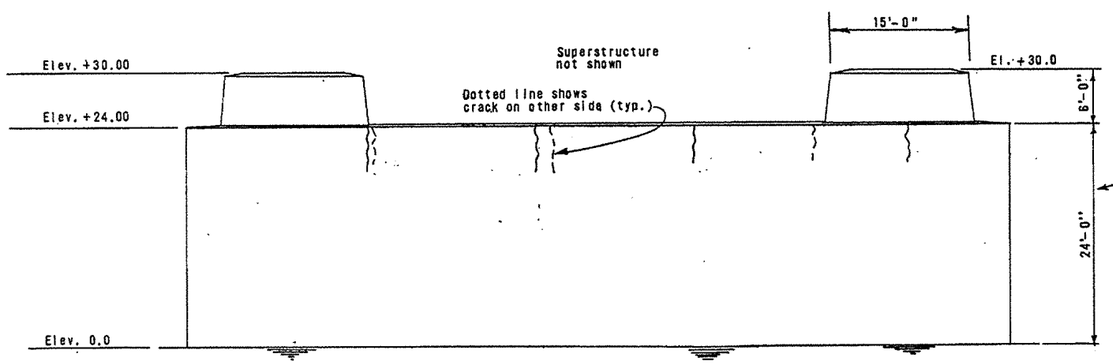
R. W. White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD W. WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA



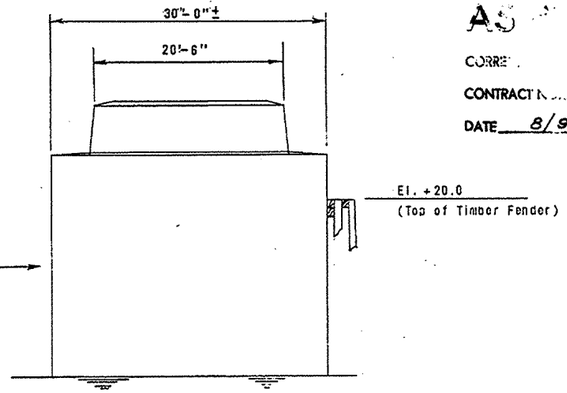
PLAN
No Scale

ACTUAL CRACK SEALING VARIES



ELEVATION
No Scale

Timber fenders not shown



END ELEVATION
No Scale

NOTES

1. Inject cracks where shown in plan and elevation views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" width.
2. The locations of the cracks are taken from field inspection notes and may vary from that shown. The exact locations will be determined by the Engineer in the field.
3. Apply concrete sealant to all concrete surfaces between Elev. +20.0 and Elev +30.0, including the tops of the pedestals.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS

CORRECTED S. WHIPPLE

CONTRACT NO. 04-001734

DATE 8/92

FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	
DETAILS	By D. Wu	Checked R. White	
QUANTITIES	By W. Toy	Checked	

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES MAINT.
Richard W. White (PROJECT ENGINEER) C16762 (REGISTERED CIVIL ENGINEER NO.)

BRIDGE NO. 33-25
POST MILE 0.0/1.3

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E5

DS 8328 04 21476

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

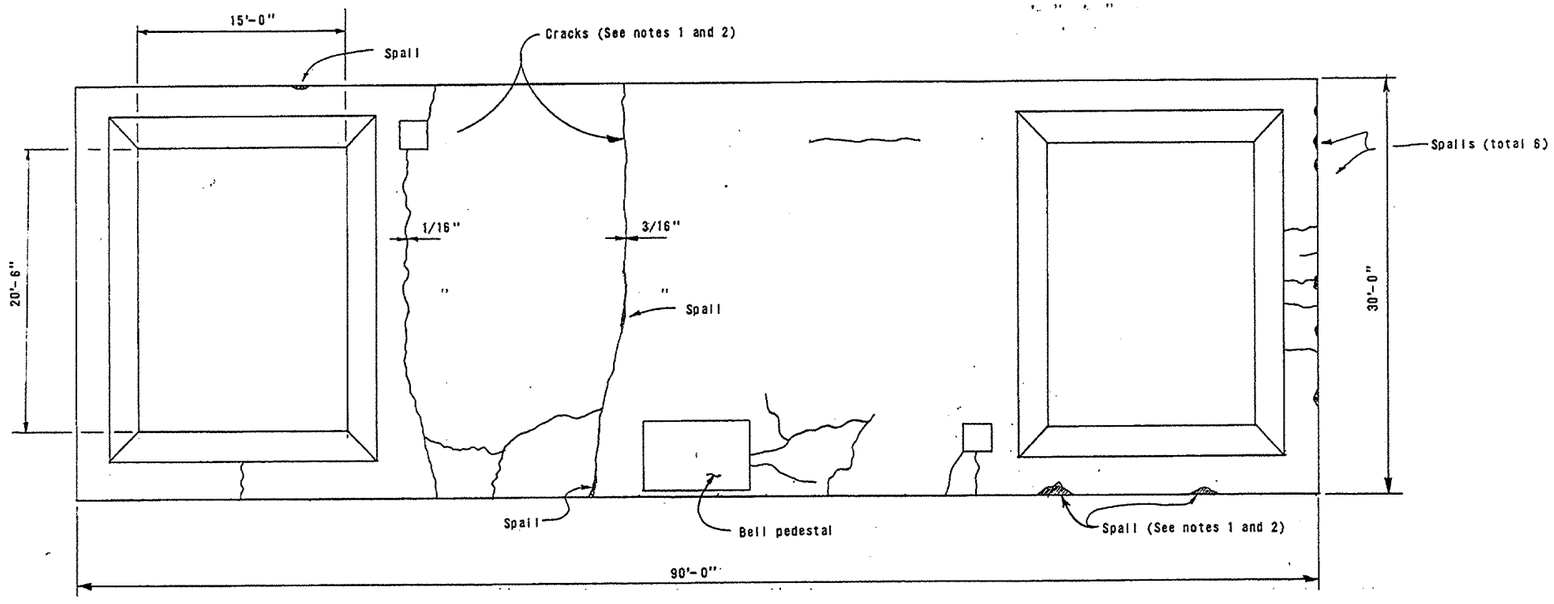
REVISION DATES (PRELIMINARY STAGE ONLY)
2/7/94

SHEET 7 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8, 0.0/1.3	9	15

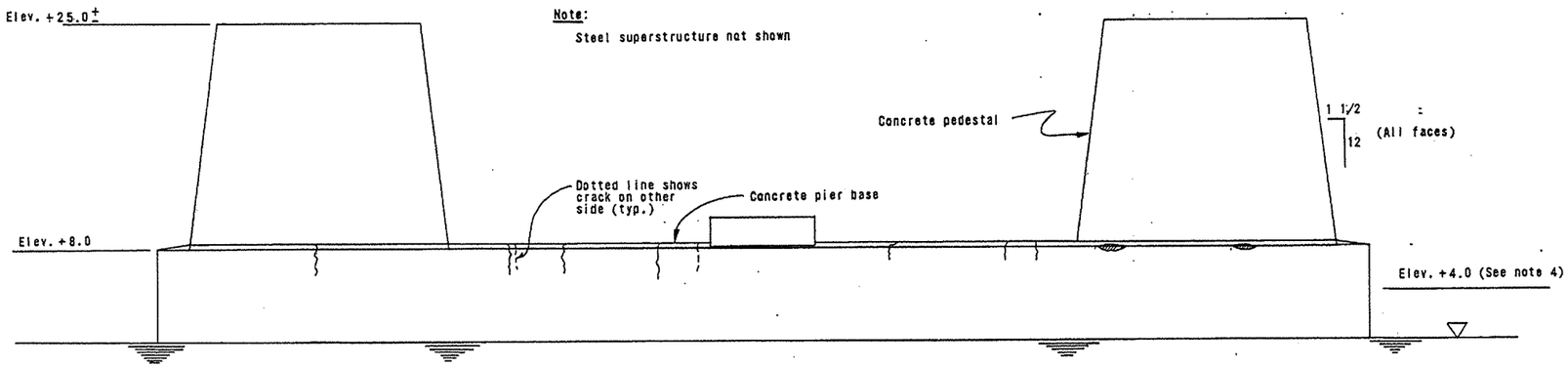
R. W. White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD W. WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA



PLAN
No Scale

ACTUAL CRACK SEALING VARIES



ELEVATION
No Scale

NOTES

1. Inject cracks and patch spalls where shown in plan views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" in width.
2. The locations of cracks and spalls are taken from field inspection notes and may vary at certain locations. The exact locations will be determined by the Engineer in the field.
3. Drill two 2" ϕ holes in both manhole cover plates at each pier.
4. Apply concrete sealant to all sides and top of the pier base and all sides and tops of the pedestals, above El. +4.0.
5. For cracks and spalls in piers E7 and E8 see E7, E8, E11, E12 and E13 sheet. Other details of these piers are similar to those shown for pier E6.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS

CORR: S. WHIPPLE
CONTRACT NO. 04-001734
DATE 8/92
FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	
DETAILS	By D. Wu	Checked R. White	
QUANTITIES	By W. Toy	Checked	

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

STRUCTURES MAINT.
Richard W. White (PROJECT ENGINEER) C16762 (REGISTERED CIVIL ENGINEER NO.)

BRIDGE NO. 33-25
POST MILE 0.0/1.3

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E6

DS B13B 84 3*89

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

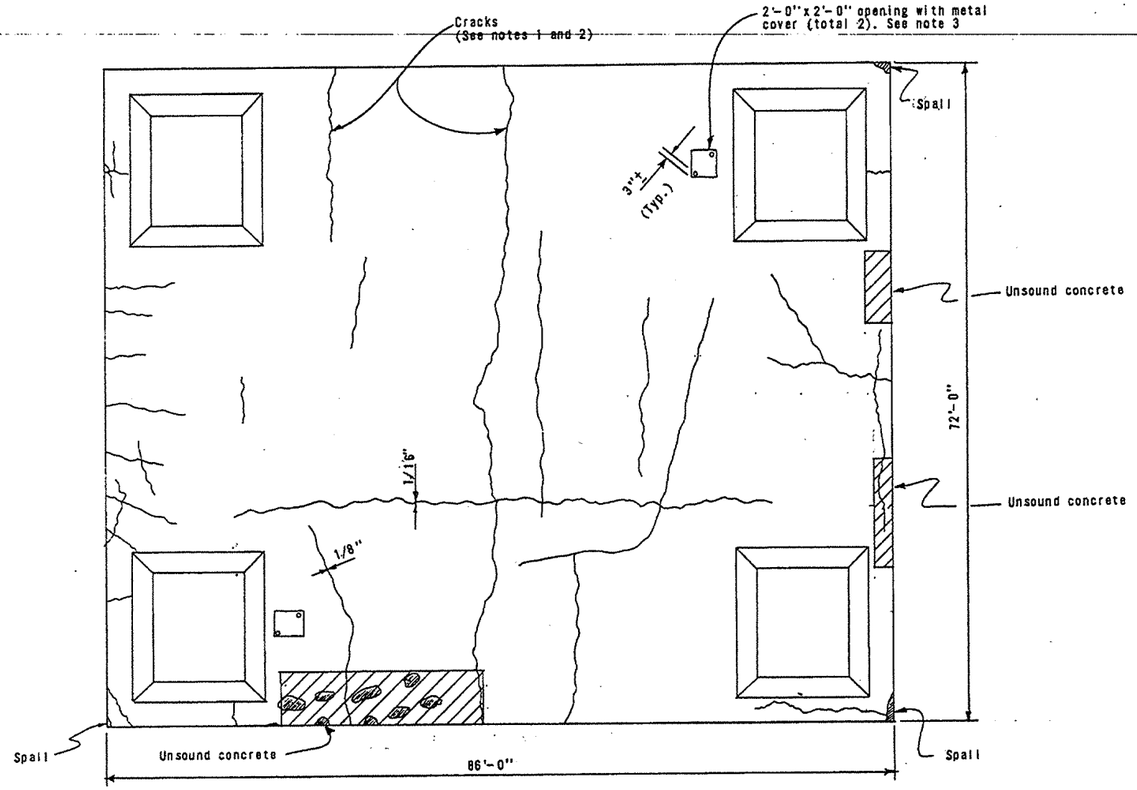
REVISION DATES (PRELIMINARY STAGE ONLY) 3/1/89

SHEET 8 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8,0.0/1.3	10	15

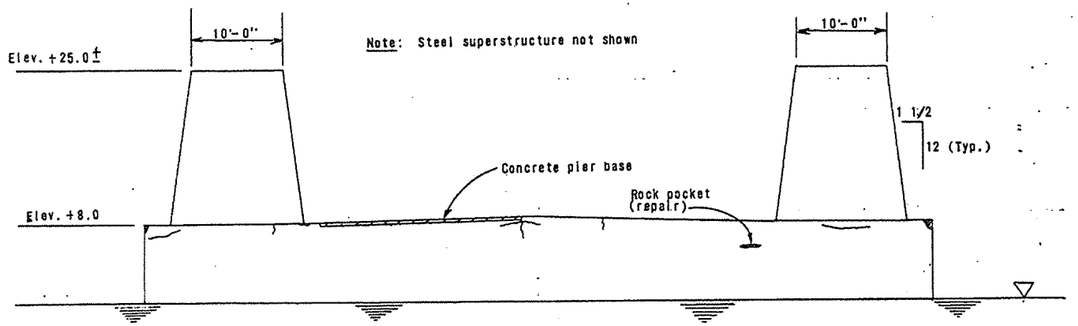
R W White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD W. WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA



PLAN
No Scale

ACTUAL CRACK SEALING VARIES

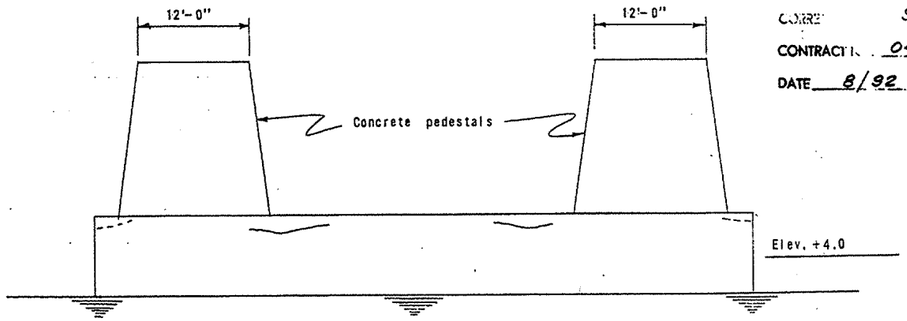


ELEVATION
No Scale

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W Datum.

NOTES

1. Inject cracks and patch spalls where shown in plan views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" in width.
2. The locations of cracks and spalls are taken from field inspection notes and may vary at certain locations. The exact locations will be determined by the Engineer in the field.
3. Drill two 2" ∅ holes in both manhole cover plates.
4. Apply concrete sealant to all sides and top of the pier base and all sides and tops of the pedestals above El. +4.0



END ELEVATION
No Scale

CORRECTED S. WHIPPLE
CONTRACT NO. 04-001734
DATE 8/92 FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINT.	BRIDGE NO. 33-25
DETAILS	By D. Wu	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked		CU 04 333 WO 001731	

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E9

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/3/89

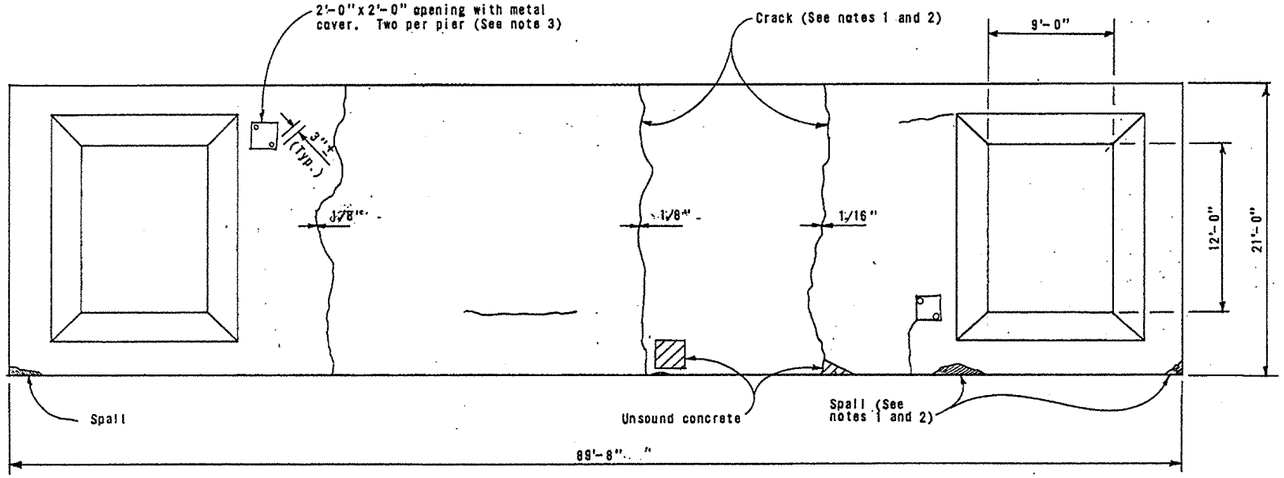
SHEET 9 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	7.8/8.8,0.0/1.3	11	15

REGISTERED ENGINEER - CIVIL

11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD WHITE
No. C16762
Ex. 6-30-93
CIVIL
STATE OF CALIFORNIA



PLAN

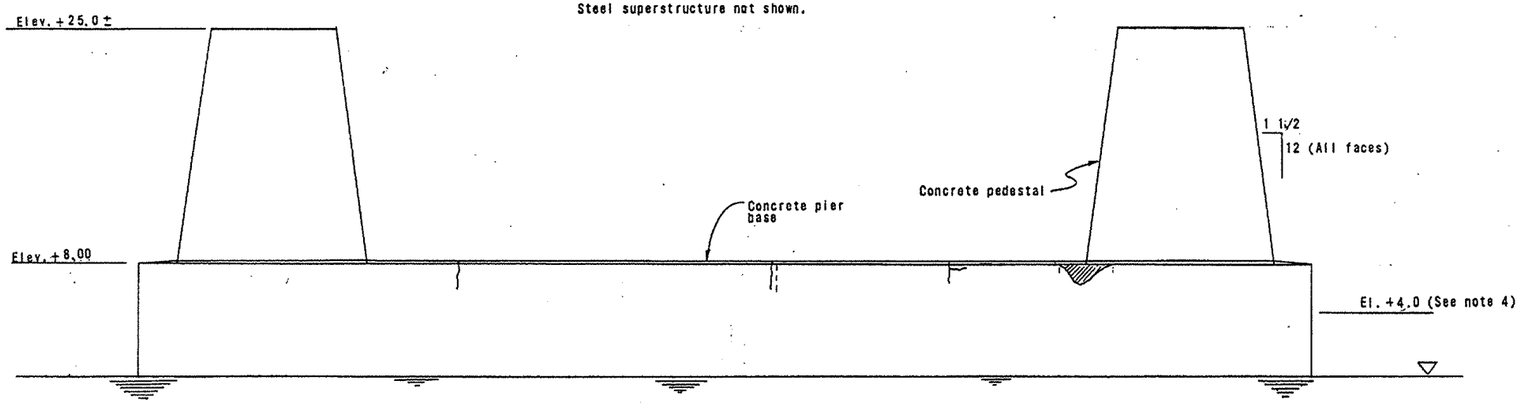
No Scale

ACTUAL CRACK SEALING VARIES

NOTES

1. Inject cracks and patch spalls where shown in plan views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" in width.
2. The locations of cracks and spalls are taken from field inspection notes and may vary at certain locations. The exact locations will be determined by the Engineer in the field.
3. Drill Two 2" ϕ holes in both manhole cover plates at each pier.
4. Apply concrete sealant to all sides and top of the pier base and all sides and tops of the pedestal above El. +4.0.
5. For cracks and spalls on piers E11 thru E16 see piers E7, E8, E11, E12 and E13 and piers E14, E15, E16, E18 and E19 sheets. Other details of these piers are similar to those shown for pier E10.

Note:
Steel superstructure not shown.



ELEVATION

No Scale

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS

CORR: S. WHIPPLE

CONTRACT NO. 04-001734

DATE 8/92

FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINT.	BRIDGE NO. 33-25
DETAILS	By D. Wu	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			SAN FRANCISCO-OAKLAND BAY BRIDGE SEISMIC RETROFIT

PIER E10

DS 0138

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/1/89

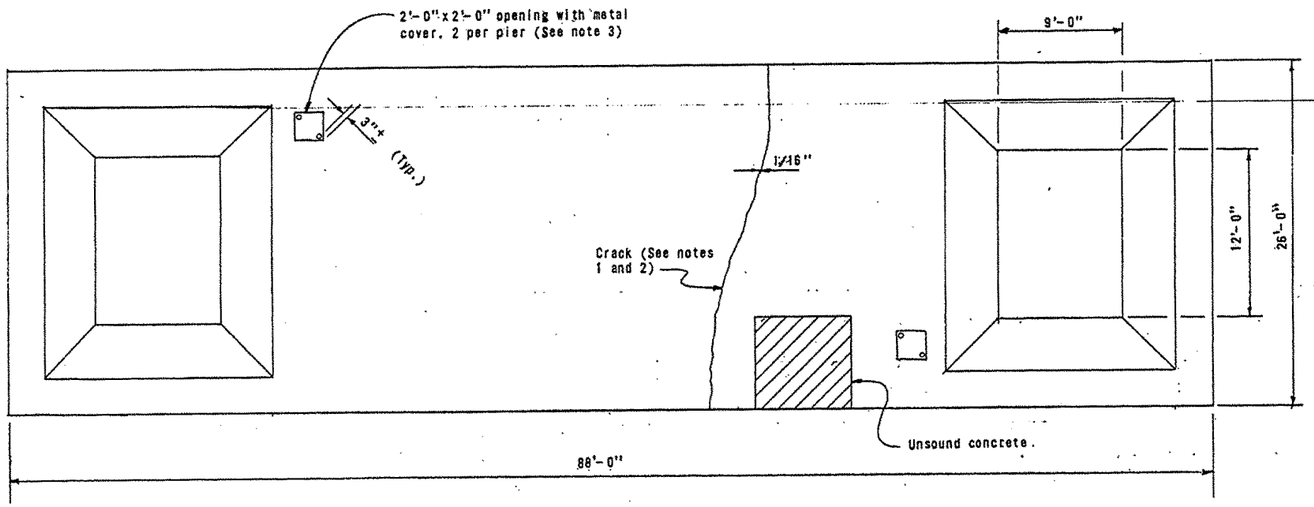
SHEET 10 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	Sheet No.	Total Sheets
04	Alg	80	7.8/8.8,0.0/1.3	12	15

R. W. White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA

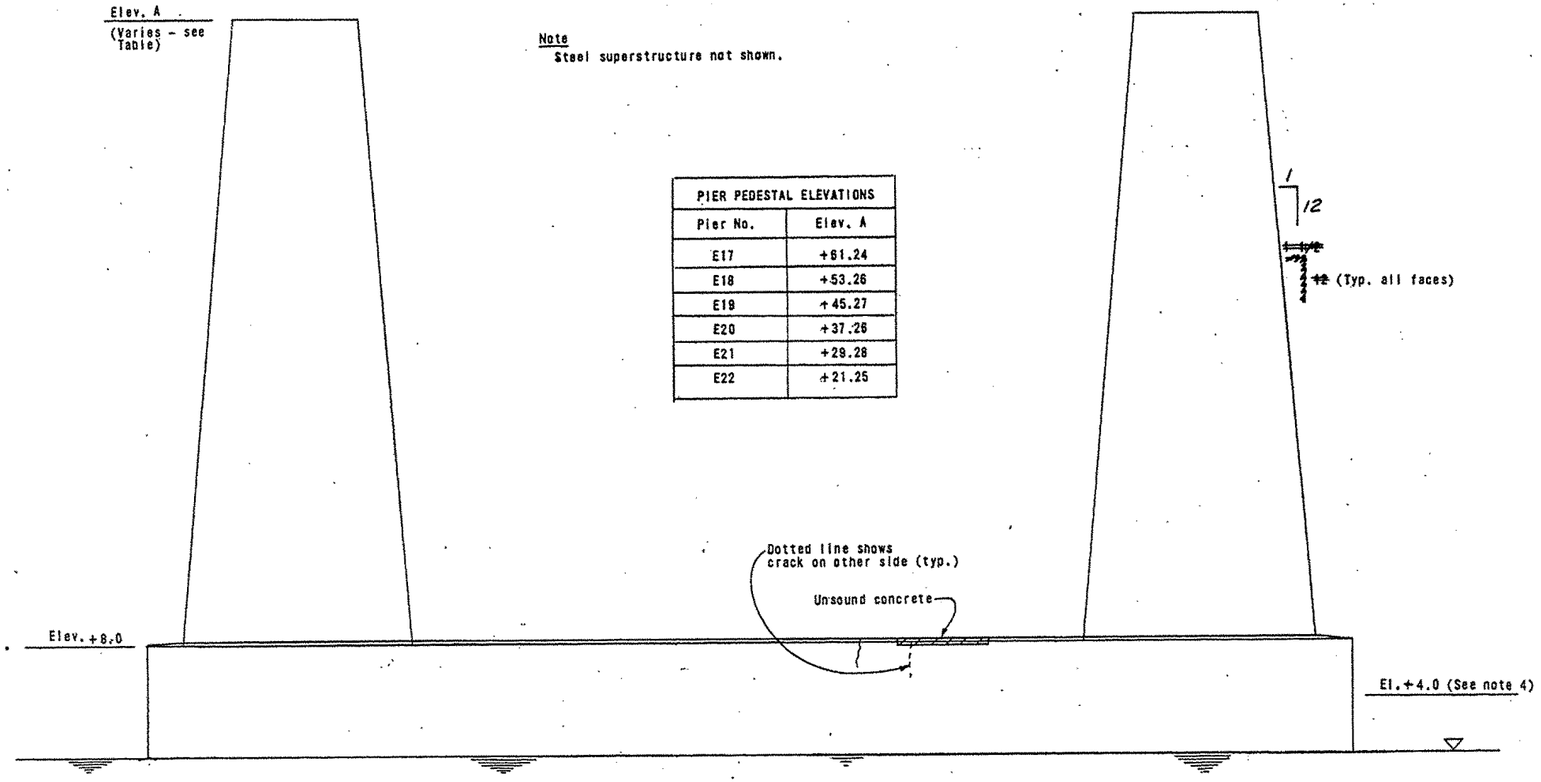
Z



ACTUAL CRACK SEALING VARIES

PLAN
No Scale

Note
Steel superstructure not shown.



PIER PEDESTAL ELEVATIONS	
Pier No.	Elev. A
E17	+61.24
E18	+53.26
E19	+45.27
E20	+37.26
E21	+29.28
E22	+21.25

ELEVATION
No Scale

NOTES

1. Inject cracks and patch spalls where shown in plan views. Crack widths shown are approximate. Undimensioned cracks are less than 1/16" in width.
2. The locations of cracks and spalls are taken from field inspection notes and may vary at certain locations. The exact locations will be determined by the Engineer in the field
3. Drill two 2" ∅ holes in both manhole cover plates at each pier.
4. Apply concrete sealant to all sides and top of the pier base and all sides and tops of the pedestals above El. +4.0.

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

AS

CORREL. S. WHIPPLE
CONTRACT NO. 04-001734
DATE 8/92
FRS 4/8/94

DESIGN	By R. White	Checked S. Larsen	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	STRUCTURES MAINT.	BRIDGE NO. 33-25
DETAILS	By D. Wu	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			

SAN FRANCISCO-OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIER E17

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/1/89

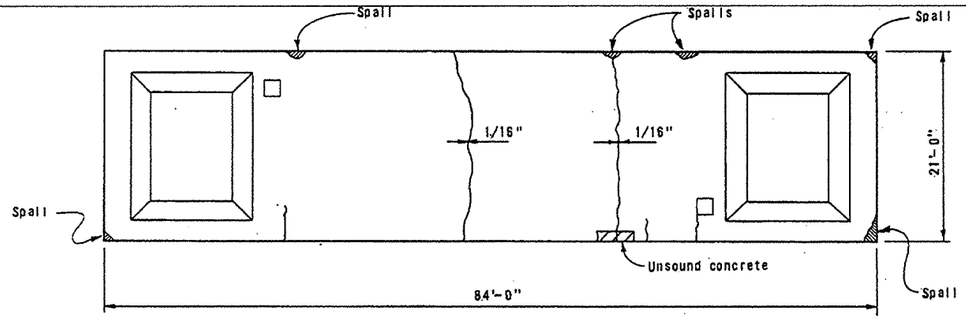
SHEET 11 OF 14

DS 0125

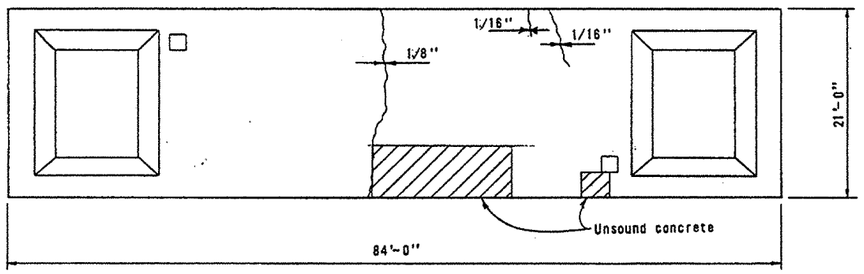
DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	80	7.8/8.8,0.0/1.3	14	15

R. W. White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

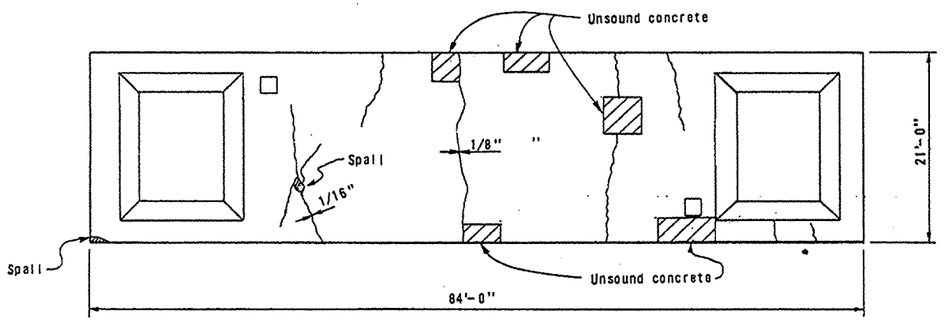
REGISTERED PROFESSIONAL ENGINEER
RICHARD WHITE
No. C 16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA



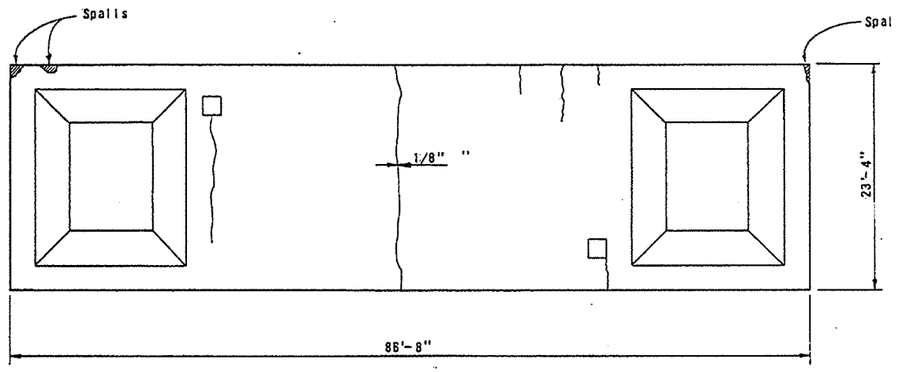
PLAN - PIER E14
No Scale



PLAN - PIER E15
No Scale



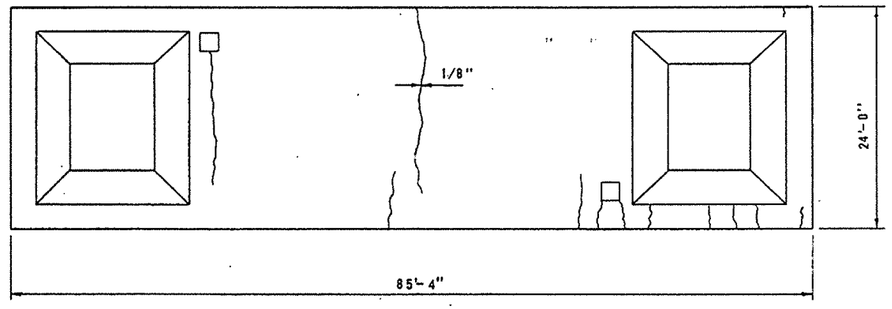
PLAN - PIER E16
No Scale



PLAN - PIER E18
No Scale

ACTUAL CRACK SEALING VARIES

AS
CORR S. WHIPPLE
CONTRACT 04-001734
DATE 8/92
FRS 4/8/94



PLAN - PIER E19
No Scale

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. datum.

NOTES

1. For additional details and notes for piers E14, E 15 and E15, see Pier E10. For piers E18 and E19, see Pier E17.

DESIGN	By D. Wu	Checked R. W. White	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE MAINT.	BRIDGE NO. 33-25
DETAILS	By J. Wong	Checked R. W. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			

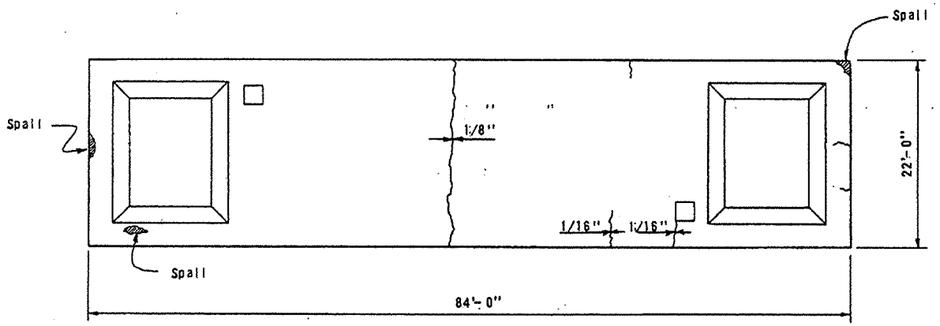
SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIERS E14, E15, E16, E18 AND E19

DS 0139 (Rev 6/85)
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
CU 04 333
WO 0017.31
Disregard prints bearing earlier revision dates →
REVISION DATES (PRELIMINARY STAGE ONLY) 2/1/89
SHEET 13 OF 14

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	Ala	80	7.8/8.8,0.0/1.3	15	15

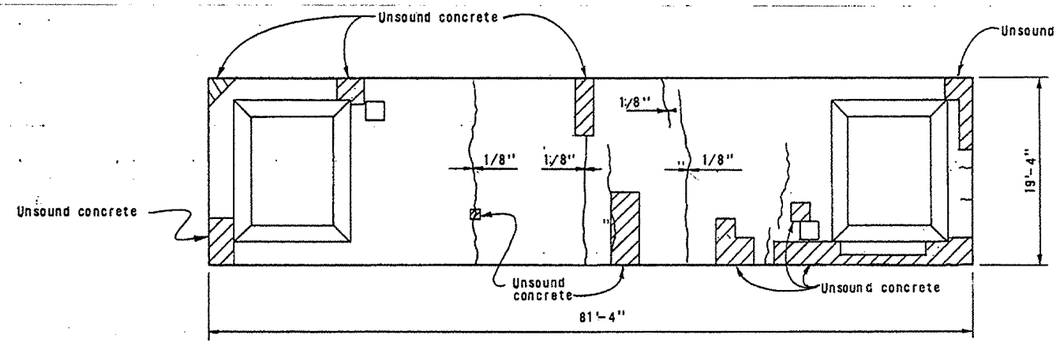
R W White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA

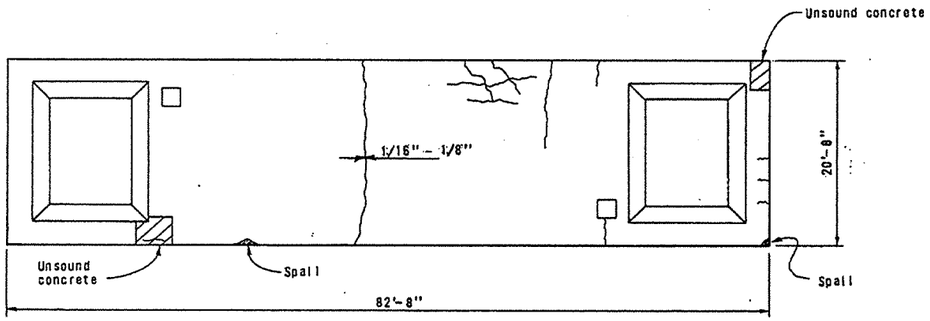


PLAN - PIER E20
No Scale

ACTUAL CRACK SEALING VARIES



PLAN - PIER E22
No Scale



PLAN - PIER E21
No Scale

AS
CORRE... S. WHIPPLE
CONTRACT N... 04-001734
DATE 8/92
FRS 4/8/92

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.

NOTES

1. For additional notes and details see Pier E17.

DESIGN	By D. Wu	Checked R. White	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE MAINT.	BRIDGE NO. 33-25
DETAILS	By J. Wong	Checked R. White		Richard W. White (PROJECT ENGINEER) C16762 (REGISTERED CIVIL ENGINEER NO.)	POST MILE 0.0/1.3
QUANTITIES	By W. Toy	Checked			

SAN FRANCISCO - OAKLAND BAY BRIDGE
SEISMIC RETROFIT
PIERS E20, E21 AND E22

DS 0139 (Rev 6/85)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/7/89

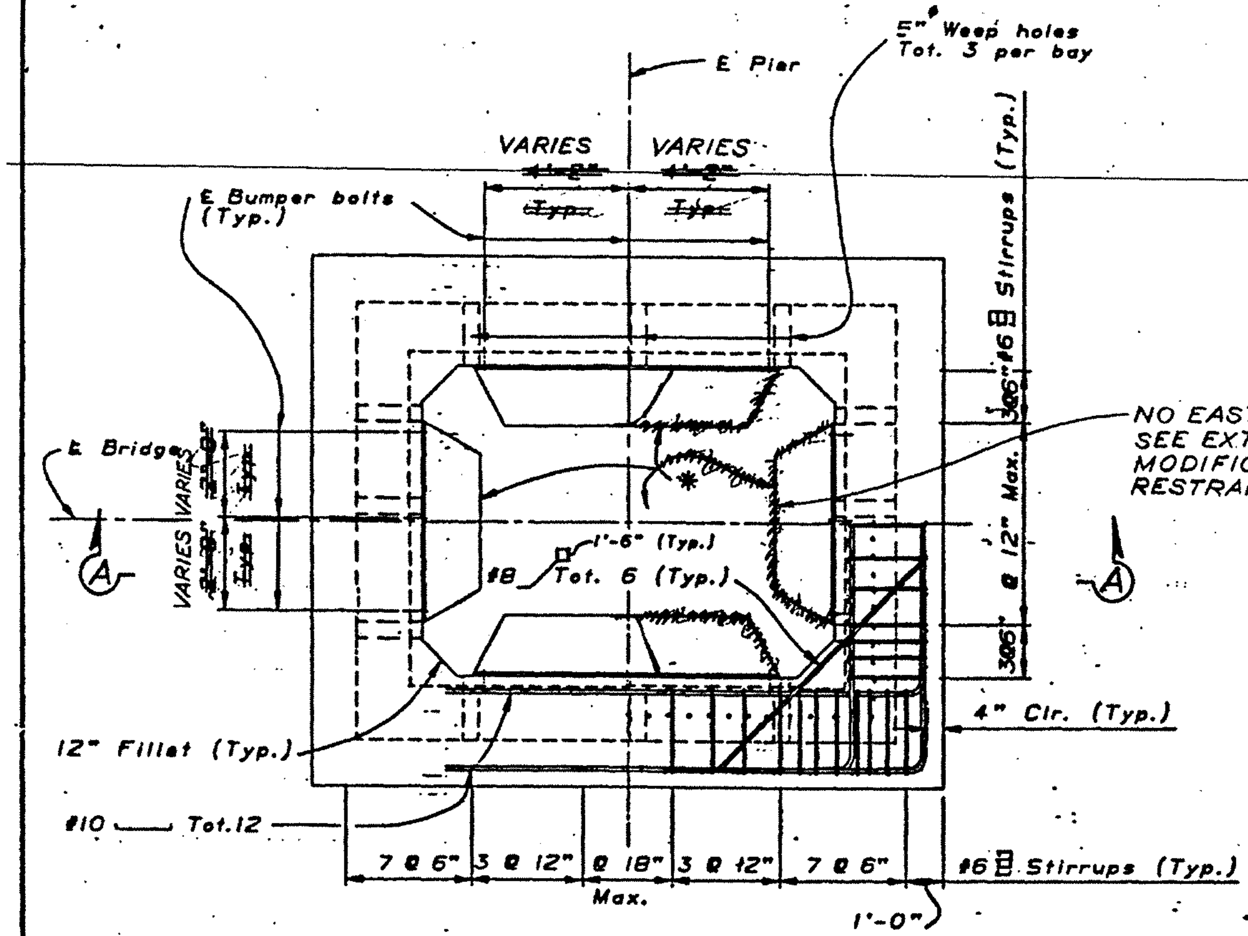
SHEET 14 OF 14

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF, Ala	80	0.0/1.3	15A	15

REGISTERED ENGINEER - CIVIL

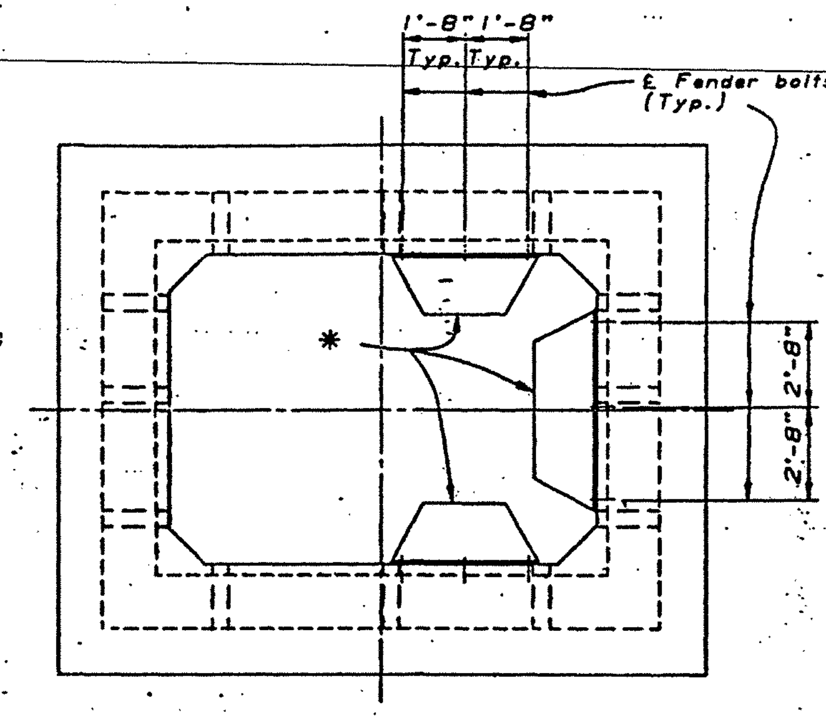
R.P. HACKETT No. 8895 Exp. 12-31-92 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE



PLAN PIERS E-18 TO E-22

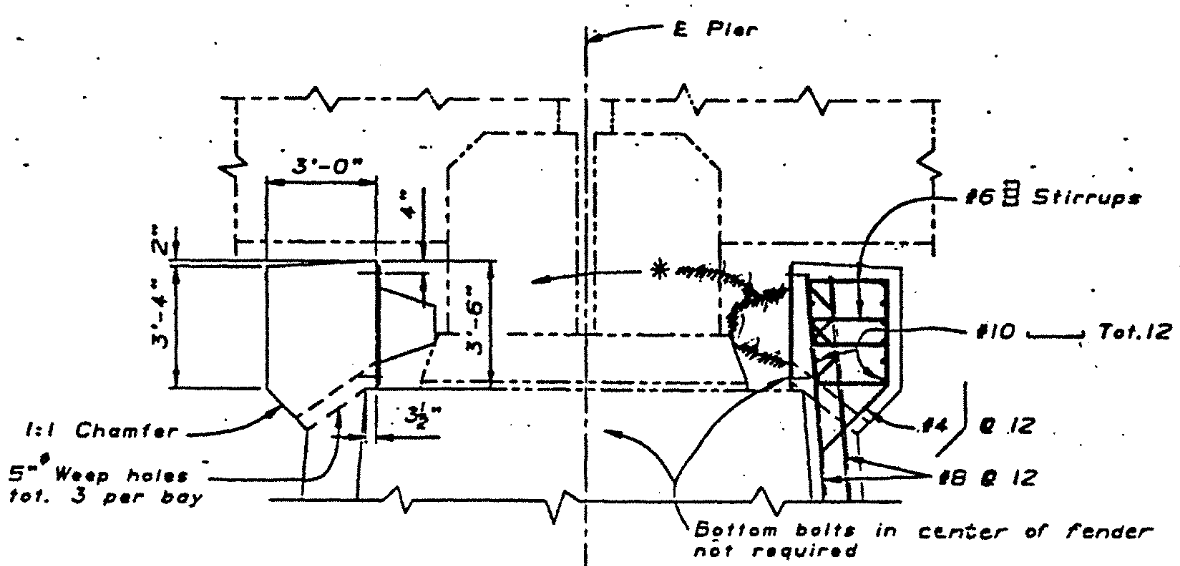
3/8"=1'-0"



PLAN PIER E-17

3/8"=1'-0"

04-SF,Ala-80,7.8/8.8,0.0/1.3
04-001734 (505) City & Co of SF & Alameda Co at var loc on the SF-Oakland Br-(Reinforce piers)



SECTION A-A

3/8"=1'-0"

ADDED SHEAR BLOCKS TO TOP OF PEDESTALS E17 TO E22. SEE ADDED SHEET FOR MODIFICATIONS OF THIS SHEET.

NOTES:

Remove existing earthquake restrainers.

– – – – Indicates existing structure.

* Indicates location of Uniroyal ~~# 500~~ Fenders. SIZE VARIES TO FIT

Pier E-17 is simmilar to other piers except as noted.

REINFORCED CONCRETE: f_y = 60,000 psi

f'_c = 3,250 psi

n = 9

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

AS BUILT

CORRECTED BY S. WHIPPLE

CONTRACT NO. 04-001734

DATE 8/92
FRS 4/8/94

CONTRACT CHANGE ORDER NO.
SHEET ____ OF ____

DESIGN	BY [signature] 3-90	CHECKED [signature] 3-90
DETAILS	BY Manuel Camacho 3-90	CHECKED [signature] 3-90
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE MAINTENANCE

BRIDGE NO. 33-25
POST MILE 0.0/1.3

S.F.O.B.B. SEISMIC RETROFIT
DETAILS FOR PIERS E-10 TO E-22

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 59-622
EA 598000

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

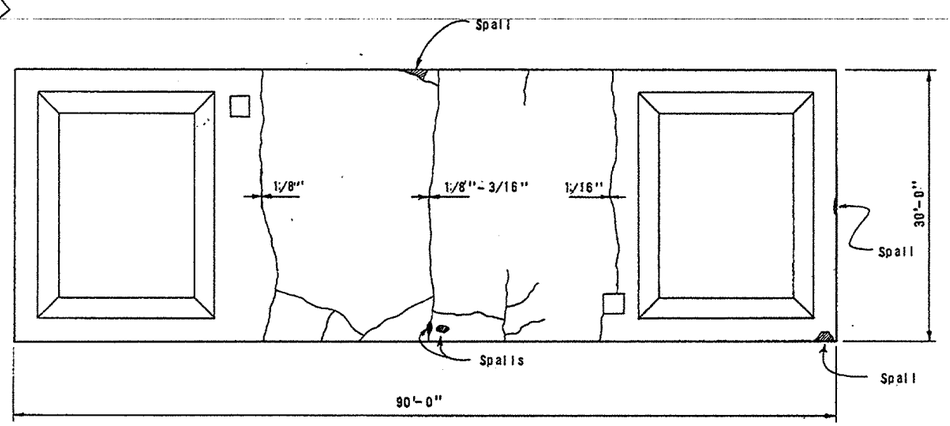
SHEET 15 OF

DS OSC 2138 (CADD 4/88)

DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO	TOTAL SHEETS
04	Ala	80	7.8/8.8,0.0/1.3	13	15

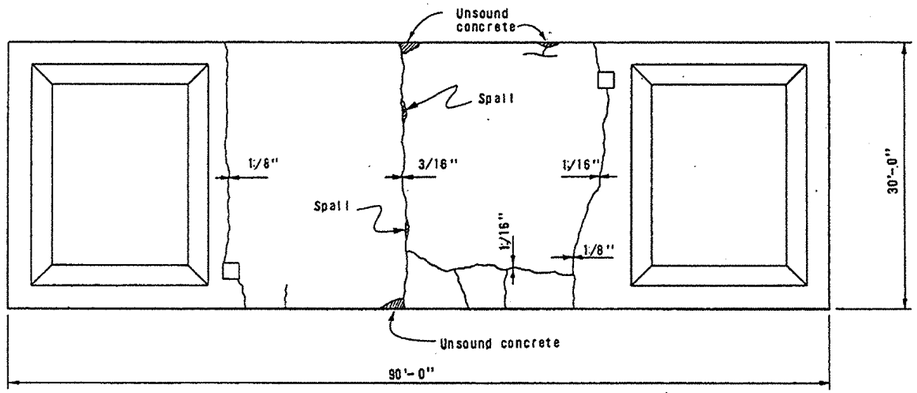
R. W. White
REGISTERED ENGINEER - CIVIL
11-20-89
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
RICHARD WHITE
No. C16762
Exp. 6-30-93
CIVIL
STATE OF CALIFORNIA

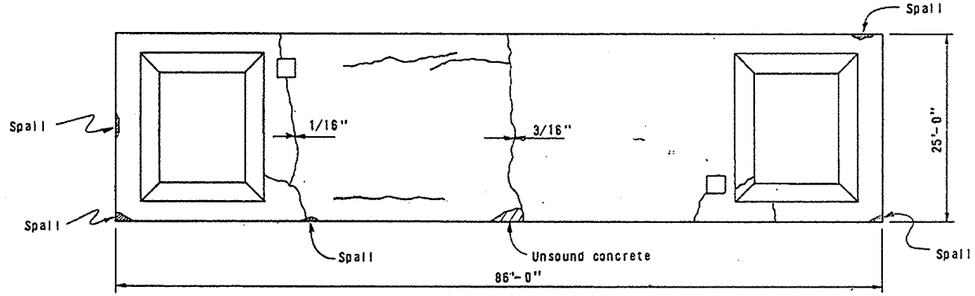


PLAN - PIER E7
No Scale

ACTUAL CRACK SEALING VARIES



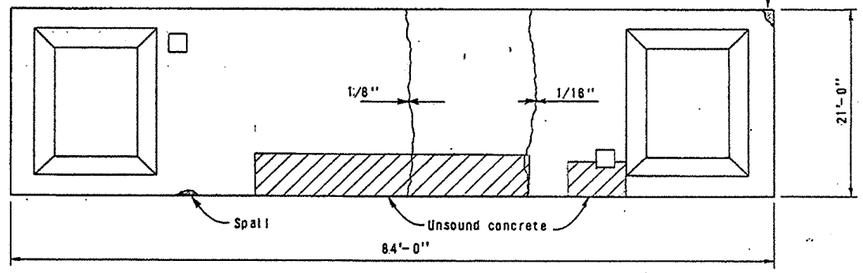
PLAN - PIER E8
No Scale



PLAN - PIER E11
No Scale

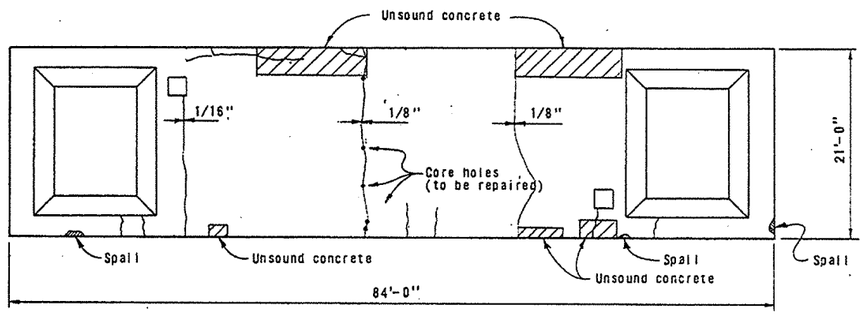
AS

CORRE... S. WHIPPLE
CONTRACT N... 04-001734
DATE 8/92
FRS 4/8/94



PLAN - PIER E12
No Scale

Note: Elevations shown are based on S.F.O.B.B. M.L.L.W. Datum.



PLAN - PIER E13
No Scale

NOTES

1. For additional details and notes for piers E7 and E8, see Pier E6. For piers E11, E12 and E13, see Pier E10.

DESIGN	By D. Wu	Checked R. White	State of CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE MAINT.	BRIDGE NO. 33-25	SAN FRANCISCO - OAKLAND BAY BRIDGE SEISMIC RETROFIT	
DETAILS	By J. Wong	Checked R. White		Richard W. White C16762 (PROJECT ENGINEER / REGISTERED CIVIL ENGINEER NO)	POST MILE 0.0/1.3	PIERS E7, E8, E11, E12 AND E13	
QUANTITIES	By W. Tpy	Checked					

DS 0139 (Rev 6/85)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 333
WO 001731

Disregard prints bearing earlier revision dates →

REVISION DATES (PRELIMINARY STAGE ONLY): 2/4/89

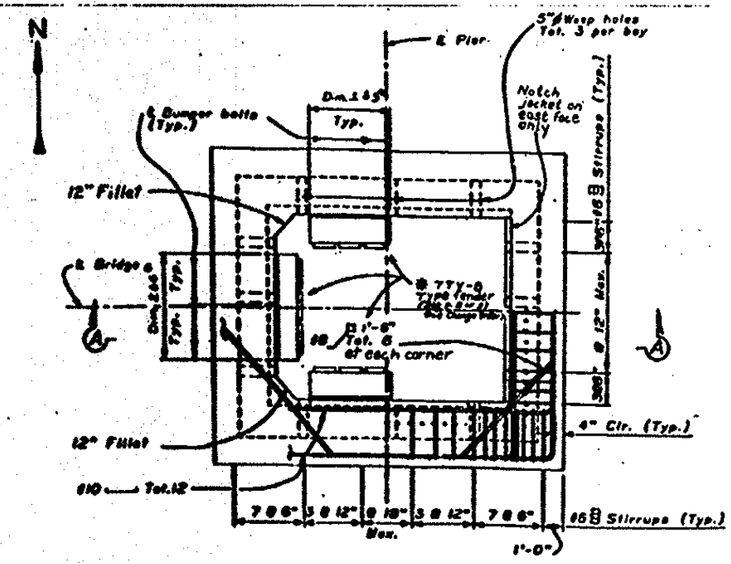
SHEET 12 OF 14

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
04	SF/Ala	80	0.0/1.3	15B	15

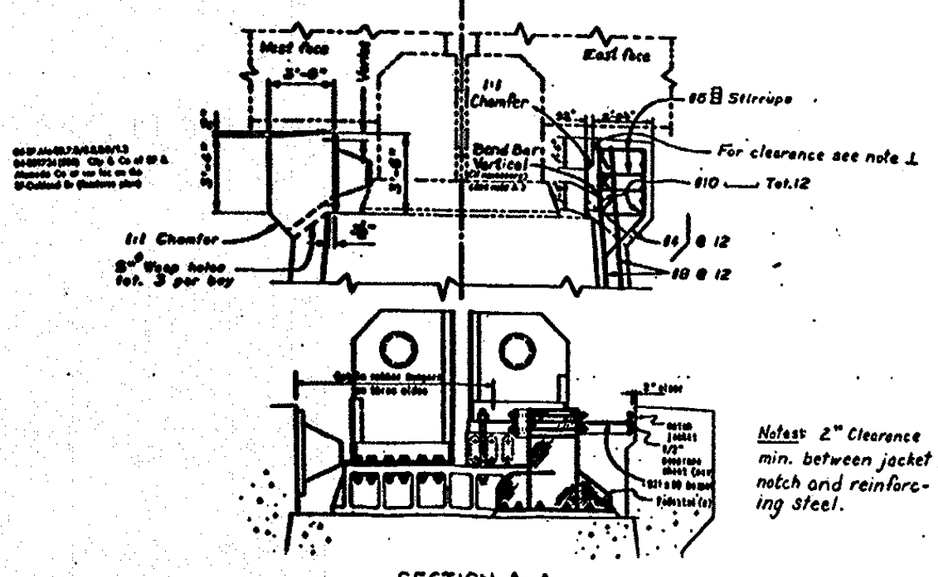
Richard W. Whipple
REGISTERED ENGINEER - CIVIL

REGISTERED PROFESSIONAL ENGINEER — Richard W. Whipple — No. C16762 — Exp. 6-30-97 — CIVIL — STATE OF CALIFORNIA

4-22-94
PLANS APPROVAL DATE



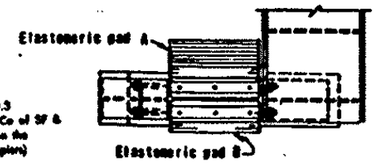
PLAN PIERS E-17 TO E-22
NO SCALE



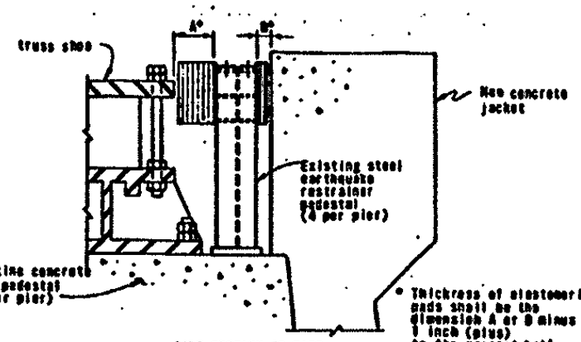
Notes: 2" Clearance min. between jacket notch and reinforcing steel.

SECTION A-A
NO SCALE

Note: Elastomeric pads are fabric reinforced laminated elastomeric pads, per Section 51-1.12N(1) of the Standard Specifications.

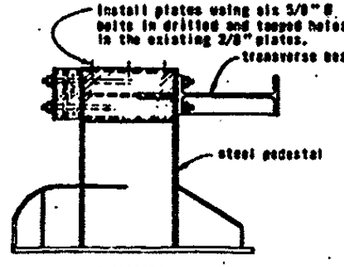


PLAN

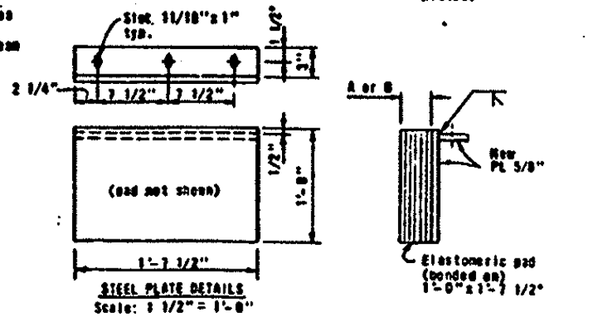


PART SECTION AT PIER
Typical for four pedestals at each pier
Scale: 3/4" = 1'-0"

* Thickness of elastomeric pads shall be the dimension A or B minus 1 inch (plus) to the nearest half inch. Dimensions A and B are measured from the face of the new 5/8" plates.



ELEVATION
EXISTING STEEL EARTHQUAKE RESTRAINER PEDESTAL WITH BUFFERS (elastomeric pads)
No Scale



STEEL PLATE DETAILS
Scale: 1 1/2" = 1'-0"

J.W. 3-19-91
BRG
Revised 3.21.91

AS BUILT
CORRECTED BY S. WHIPPLE
CONTRACT NO. 04-001734
DATE 8/92
FRS 4/11/94
NO AS BUILT CHANGES

CONTRACT CHANGE ORDER NO.
SHEET ___ OF ___

DESIGN	BY	CHECKED	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE MAINT	BRIDGE NO. 33-25	S.F.O.B.B. SEISMIC RETROFIT	
DETAILS	Frank R. Segura 4/94	CHECKED			POST MILE 0.0/1.3	DETAILS FOR PIERS E-17 TO E-22	
QUANTITIES	BY	CHECKED					

05 080 2130 (CADD 6/89)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

CU 04 933
EA 001731

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)

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